



Published on the 10th of each Month by

## THE INDIA RUBBER PUBLISHING CO.

TIMES BUILDING, NEW YORK, U. S. A.

JNO. R. DUNLAP.

H. C. PEARSON.

Vol. 15.

OCTOBER 10, 1896.

No. 1.

SUBSCRIPTIONS: \$3.00 per year, \$1.75 for six months, postpaid, for the United States and Canada. Foreign countries, same price. Special Rates for Clubs of five, ten or more subscribers.

ADVERTISING: Rates will be made known on application.

REMITTANCES: Should always be made by bank draft, Post Office Orders or Express Money orders on New York, payable to THE INDIA RUBBER PUBLISHING COMPANY. Remittances for foreign subscriptions should be sent by International Post order, payable as above.

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Entered at New York Post Office as mail matter of the second-class.

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## THE BICYCLE AND TIRE TRADES.

THE crop of failures in the bicycle trade which careful observers predicted for this fall has been ripening fast of late, without any assurance that the harvest is at an end. The interest for rubber-men in this unfortunate situation lies in the fact that so many of the bicycle concerns which have gone down number tire-makers among their creditors, the two branches of trade having suffered from like causes. It is not to be supposed that the bicycle industry has reached a turning-point which marks the beginning of a decline; only the "boom" feature has been checked, leaving the way clearer for manufacturers who have built upon a foundation of sound business principles.

Bicycling really has made little more than a beginning, except that it has progressed beyond the experimental stage. There are millions more of Americans and Englishmen alone who may be expected to learn to ride wheels and to own them, and millions of non-English-speaking peoples who are destined to become equally enthusiastic wheelmen. There are races and tribes among whom the wearing of clothes is not general who doubtless will buy wheels before they acquire a taste for trousers and shoes. With such a widespread and growing demand, with no end in sight, the business of making bicycles will be profitable—in the proper hands—as long as the making of sewing-machines or steam-engines or clocks.

With all the depression in bicycle-making in America there is no indication that the real leaders in the industry intend to lessen their production or to lower the price of high-grade wheels. In other countries such depression does not exist. Our European contemporaries may not have seemed so "enterprising" as some of our own makers, but they have kept within the immediate demand instead of exceeding it, and they have been more careful in trying to dispose of their wheels to the right buyers. And here is the key to the whole situation.

The novice in bicycle-making in the United States, offering new wheels in the same market with manufacturers who have devoted a dozen or score of years to establishing a reputation for their goods, has felt obliged to make concessions in order to win customers, and the concession most generally made has been in the reckless granting of credits. It takes money to build bicycles—cash for wages and practically cash for materials—and unless money is incoming at an equal rate disaster is certain.

A widespread practice among the newer manufacturers has been to send out wheels on consignment to whoever would consent to receive them—generally agents without capital, in towns where agencies were already established on a business basis for wheels having a fixed reputation. In not a few cases the banks have so far thrown prudence to the winds as to advance money on these unsold goods, awakening to the truth only when notes matured and the manufacturers, having sold no wheels, were unable to take them up. In every town and village there are some of these consigned bicycles—many of them good, no doubt—

either in the hands of the agents, or sold on the installment plan, often at cut prices, and to persons unable to make payments as promised.

It is an easy matter to figure out the difference between the cost of 10,000 or 20,000 bicycles and a selling-price of \$100, and the diversion is an enchanting one. But with the wheels scattered throughout the United States, and some of them consigned to foreign agents, it is not so easy to repay from sales the money borrowed to produce them. Under such conditions the failure of many manufacturers was inevitable, and some who are still keeping their heads above water would have gone down but for the leniency of creditors.

These conditions have been duplicated to a large extent in the rubber-tire business. Recent beginners in the manufacture of tires, in the competition to secure orders, have extended credits which would have been denied by older concerns having an established demand for their goods, and, not unnaturally, the customers thus secured have been among the first bicycle manufacturers to succumb to the business depression. Bicycle-tires have also been placed upon the market on consignment, which is as uncertain a way for rubber-men to dispose of their capital as for bicycle-manufacturers. But it is not to be inferred from any present conditions that there is to be no future for the tire business. Not only will every new bicycle turned out need a pair of tires before it can be used, but every bicycle now in use will require more than one extra pair of tires before it goes to the scrap-heap.

Our bicycles may really be better than the English types, but that doesn't justify our manufacturers in scorning the conservatism which has preserved the English trade from such an era of failures as we are now experiencing. The guarantee evil against which the new Rubber Tire Association has set its face has been a serious obstacle to profits in the tire trade, but it is not the only feature that merits the attention of this organization.

#### CHEAP MONEY—LOW WAGES—POOR GOODS.

THE price of first-grade bicycles in Mexico is \$200, or double their price in this country, although \$100 in gold will buy such wheels in Mexico or anywhere else. A recent issue of *The Mexican Herald* in which bicycles are advertised at this price contains the editorial assertion that the wages of labor in Mexico "have advanced but little since silver was at a premium over gold." This is equal to saying that in Mexico one must work twice as many days as formerly to buy goods which have not changed in price in the United States. The same thing is true of other countries whose money is on a silver basis, and it has tended toward the production of the cheap goods with which continental Europe has been flooding the markets of the world, to the great detriment of British trade.

Cheap money means, of necessity, low wages and goods of low grade. The wage-earner who was paid 25 cents a day when silver and gold were at par received the equivalent of an English shilling, whereas 25 cents a day in silver is now equivalent only to sixpence, and he must have goods

at proportionately lower prices or refrain from buying. Germany seems of late to have taken the lead in producing goods which can be bought in the silver-using countries for the same number of dollars and cents as were formerly paid for goods in the same lines, but these goods, according to all English testimony, are as inferior as they are cheap. Under instructions from Mr. Chamberlain, the colonial secretary, there has been held in London lately an exhibition of such goods of foreign manufacture as have been displacing the products of England in her own colonies. One of our London exchanges has dubbed it "a shoddy exhibition," and not without reason, if the half told of the goods is true. But such goods are a natural consequence of depreciated money.

The chief interest of this to Americans lies in the fact that, over a considerable part of the world, in case they should desire to extend their export trade, it must be in competition with those same cheap goods, designed primarily for markets where silver is the standard of value. This fact will confront us even after the proposition to adopt the silver standard in the United States has been buried and forgotten.

JAPAN HAS ADDED A RUBBER FACTORY to the numerous industrial enterprises developed in that country since her people have begun to aspire to higher rank among nations. But there is little reason as yet for American manufacturers to fear competition from the "Yankees of the East." Before any country can make itself felt to an important extent in the export of any manufactured product, it must become able to supply the home demand, and this the Japanese manufacturers will hardly be able to do without a good many years of experience. The rubber industry has existed in Canada almost as long as in the United States, and it has grown there at a steady pace, producing a good quality of goods, with all the advantage of cheap labor, and yet the rubber exports from the Dominion remain insignificant. It is probable that the principal effect of the Japanese rubber factory for some time to come will be to make more widely known in that country the uses of rubber which are common elsewhere, with the effect of opening a wider market for the superior articles in this line manufactured here or in Europe.

#### THE WINNIPEG RUBBER CO., LIMITED.

A COMPANY under the above name has recently been granted a local charter to do business in the northwest, its headquarters being at Winnipeg. The prime mover in the new enterprise is Mr. A. A. Andrews, who for some years has been handling rubber goods in that part of Canada. The company are not manufacturers, but have a fine store and carry a full line of rubber goods.

#### HUNTING RABBITS WITH RUBBER TUBING.

AN ingenious hunter living in Oil City, Penn., has aroused the envy of the local hunters by his success in killing rabbits. At one end of a length of rubber tubing he has fastened a tin whistle, which he covered with calico to prevent the dirt from clogging up the whistle. When a rabbit takes to the burrow the hunter inserts the tubing which from its pliable nature can be made to follow the windings of the hole, and when it is near the rabbit the hunter blows through it sounding the whistle. The rabbit loses no time in making for outdoors.

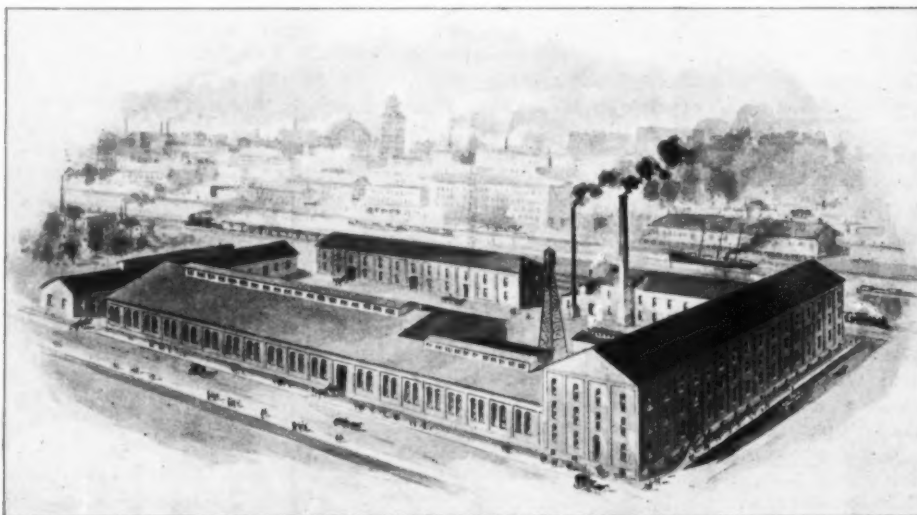
## THE INDIA-RUBBER BUSINESS IN TRENTON.

By W. H. Dunbar.

TO THE EDITOR OF THE INDIA RUBBER WORLD: I noticed in a recent issue of your paper a very interesting description of the rubber business in New Brunswick. That effort spurred me to send you a brief résumé of the rubber industry in this thriving city. There are in all nine factories here, all making mechanical rubber goods, and all enjoying a fair measure of prosperity. The beginning of the rubber trade here, however, dates back to the early fifties, when a Boston man by the name of Dunbar established a small plant. He was succeeded by two veterans, the late Jacob D. Joslin and Allan Magowan. The first factory ran intermittently for two or three years, and then lay idle for several more. Indeed the rubber business seemed dead in Trenton until the advent of Mr. Charles V. Meade. To him is due the credit for establishing the rubber business on a firm basis, he having started no less than five mills in the city and vicinity. He met with numerous reverses, but was no sooner out of one mill before he would begin to build another. His first venture was on Clinton street, on lands now occupied by the Trenton Brass Co. He became embarrassed and the sheriff came to levy on his mill, but found nothing there, as he had removed the machinery the night before to a vault which he had built on his farm, and which is still pointed out. He next organized the Meade Rubber Co., and located it back of a grist mill on Clinton street which afterwards became part of the rubber mill. Misfortune again befell him, and he started another mill, this time at Hamilton square which was known as the C. V. Meade Rubber Co. Here he also failed, and returning again to Trenton he purchased the "Old Hotel" opposite the grist mill mentioned above, which he converted into a rubber factory, but soon afterward sold out to the Star Rubber Co., who succeeded the Meade Rubber Co. in 1868. The last company that he formed was the Hamilton Rubber Co., which began business in February, 1870. Meade's personality was unique and numerous stories are told of his eccentricities, but he had an abiding faith in the future of the rubber business.

The two Meade mills which were acquired by the Star Rubber Co. were run by them until 1877, when the one known as the Old Hotel was burned. The other was operated until the Star's failure in 1891. It was then bought by the Empire Rubber Mfg. Co., by whom it is now run for the manufacture of carriage cloth, mechanical goods, and pneumatic tires. The Empire now have a one story brick building, in which are the offices and store rooms, and a three story brick building, the

whole first floor of which is given up to receiving and shipping rooms, the second floor is the light work room, while on the third floor is the carpenter shop. Back of this is a two and a half story brick building, on the first floor of which are located the mills and calenders, tubing machines and hydraulic presses, and on the second floor is the hose and belt room. On this floor are also the machines for stitching belts, and automatic machines for cutting can rings. Above this is the department for lining cotton and linen hose. Back of this is a three story brick building, on the first floor of which is the machine shop, and on the second floor the cotton is prepared for the circular looms which weave the jackets for cotton hose. Above this room on the third floor are the weaving rooms. To the left is a large one story brick building devoted to the manufacture of carriage drills. Here is also located the tire department.



FACTORY OF THE HOME RUBBER CO., TRENTON.

The Meade mill at Hamilton square was bought by the Mercer Rubber Co., by whom it is still operated in the line of mechanical goods. The Hamilton Rubber Co. retained the name given it by Mr. Meade until their failure in 1891, although there was some changes in the management. In 1893 it was bought by the Eastern Rubber Mfg. Co., and used chiefly in the manufacture of bicycle tires.

Up to 1868 the Whitehead Bros. were operating a woolen mill. In that year they were induced to go into the rubber business by Allan Magowan, who was then with the Mercer Rubber Co. They were the first mill to make garden hose in Trenton, and have had an uninterrupted and successful career, making all kinds of mechanical goods.

The next to engage in the rubber business was the Home Rubber Co., which was started in 1875 to make gossamer clothing. They continued in that line until 1885, when they ceased its manufacture to devote themselves entirely to mechanical goods. Since 1885 their success has been phenomenal. Starting with a small plant they now have the largest in the city. Their main factory consists of a three story brick building in



which are the offices of the manager and superintendent, and also the shipping and receiving rooms. On the first floor are the small presses for making all kinds of molded articles and specialties, and here also are the tubing machines. The second floor is used as a cutting room, and stock room for hose stock. The third floor is known as the "old hose room," and is still used in the making up of garden hose. They have also recently built two brick additions, which are used as mill and calender rooms and hose rooms. In the mill room are twenty mills, four calenders, two belt presses and belt tables and cutters. A new stock calender and a new hydraulic belt press are said to be the largest and most perfect machines ever put into a mechanical goods factory. Beyond the mill room is the hose room but recently completed and which is beyond all doubt one of the largest and best arranged to be found anywhere. There are tables for thirty-six hose makers, which with the old hose room enable them to work forty-eight makers, a larger number than is employed in any other hose room that comes within my knowledge. In this room is also the tire department with fourteen hydraulic presses, and all other appliances for the manufacture of tires.

In a frame building a short distance from the main building is the rubber reclaiming plant, which is one of the best to be found anywhere. They operate their own electric light plant, while the power for the factory is furnished by a new 300 h.p. Corliss engine. This company is a close corporation owned by the Stokes family, and was built up chiefly through the tireless energy and business ability of Mr. J. Oliver Stokes, the treasurer and general manager.

The next company to engage in the manufacture of rubber goods was the Globe Rubber Co., which was started about 1878 by John B. Candy and others. It is still known as the Globe, but there have been during the last eighteen years several changes in the management. Their present plant consists of a two story main building, in which on the first floor are the shipping and receiving rooms, the small press room, mill and calender rooms. On the second floor are the hose room, light work and belt rooms. They also have a three story brick building for crude stock and in which is located a rubber reclaiming plant.

The next to start a rubber mill was Allan Magowan and his son Frank A., together with several others who started the Trenton Rubber Co. in 1881.

The Trenton covers considerable ground, their buildings all being one story high. They have a complete plant for the manufacture of mechanical goods, which comprises friction and stock calenders, hydraulic presses, tubing machines, as well as a rubber reclaiming plant. They also have their own electric light plant.

The Crescent Insulated Wire Co., which was started in 1886 by C. Edward Murray, occupies a large three-story brick building in which is the necessary machinery for covering all kinds of wires and cables with rubber, in the manufacture of which this concern enjoys an enviable reputation. By the side of this building is the one-story frame building occupied by the Assanpink Rubber Co., who reclaim rubber. They have all the necessary machinery, such as mills, crackers, devulcanizers, etc., and do a large business. This business is also owned by Mr. Murray. The company make recovered rubber by the chemical process and have customers all over the world.

The Rubber Valve and Spring Co. was started in 1885 by L. F. Gooch, who built a factory across the canal from the Hamilton Rubber Co. This he ran until 1891, when it passed into the hands of a receiver. It lay idle for several years when it was purchased by the Hardwick Rubber Mfg. Co. in 1894, and run by

them for about a year, when they went out of business. It then lay idle until the past spring, when it was started up by the Mundell Rubber Co., who make tennis soles, corrugated matting and sheet packing and contemplate the manufacture of all kinds of mechanical goods.

This completes the list of the mills in Trenton, but across the river is the Goodyear Vulcanite Co., of Morrisville, who have a large plant and make all kinds of hard rubber goods. As can be judged by this brief review the rubber mills of Trenton are an important factor in the commercial life of the city, as they employ about 1500 hands and pay out thousands of dollars every week in wages, and while it is impossible for me to give the value of the goods sold every year, it is larger no doubt than any other single Trenton product.

Trenton, N. J., September 1, 1896.

### EXTENT OF THE BICYCLE-TIRE TRADE.

GR<sup>EAT</sup> as has been the activity of the bicycle-tire industry of late in the United States, it is estimated by the Boston *Commercial Bulletin* that the demand from this source has been less than 4 per cent. of the total output of Pará rubber, which would be equivalent to 8 per cent. of the imports of Pará rubber into the United States. As the *Bulletin* figures it out, "the production of rubber bicycle-tires a year in this country is in round figures 1,000,000 sets, and as the consumption is about 1½ pounds to the set, the total consumption it is seen is about 1,500,000 pounds, or about 750 tons. This is not all Pará, by any means, as other kinds and other admixtures are used. Many of the tires that have been made in the past year or two have been made from cheaper rubber, and partially from reclaimed rubber. Makers of the latter say they sell considerable of their best grade reclaimed rubber, worth about 15 cents per pound, to the makers of good tires. The cheaper tires, of course, have considerable old scrap in them. With fine Pará selling at about 75 cents per pound, the makers of cheap tires cannot afford to buy much of the high price stock, the bulk being made up by the cheaper grade stock." However right the *Bulletin* may be in other respects, it is doubtless true that the production of tires this year will largely exceed 1,000,000 sets.

According to the same paper, there has been very little change or improvement in the bicycle-tire industry. Much the same kind of a tire is used, the weight being about the same as last year. As a rule the tires now used weigh 3½ pounds to the set. In 1891 the average was 8 pounds and the cost \$21; in 1892, 6 pounds and cost \$15; in 1893, 5 pounds and cost \$11; in 1894, 4 pounds and cost \$9; last year the 3½ pound tire brought \$7, whereas it is now worth but \$6. It is estimated that from 25 to 35 per cent. of the tires used are of the double-tube type.

### THE FIRST PNEUMATIC TIRE.

THE date of the invention of the pneumatic tire would be placed by the ordinary thinker as within ten years at least, yet the *Scientific American* in 1847 published the following note.

"A number of cabs with newly invented wheels have just been put on the pave here. Their novelty consists in the entire absence of springs. A hollow tube of India-rubber about a foot in diameter, inflated with air, encircles each wheel in the manner of a tire and with the addition of this simple but novel appendage the vehicle glides noiselessly along, affording the greatest possible amount of comfort to the passengers."



## ACTION OF ILLUMINATING GAS ON RUBBER TUBING.

By H. Grosheintz.\*

I HAVE been induced to make some experiments on this subject by the following system. To observe the variations of pressure of illuminating gas, I attached a gas-jet, by means of an India-rubber tube, to a water manometer, formed of a glass tube, made U-shaped, and filled with a colored liquid serving as an index. The reading of the pressure being made and the gas shut off, I was astonished to see, after a dozen hours, that the pressure in the manometer was replaced by a depression of the liquid. This phenomenon was produced at each verification made with the manometer. Before attributing it to an effect of endosmosis, I examined our gas to ascertain if it contained substances soluble in water, or capable of uniting in the vessel containing the colored liquid; but it was not so. Nothing then remained but to attribute the phenomenon to the Caoutchouc of the tubing itself.

To verify this assertion I bent, in shape of a siphon, some glass tubes  $\frac{1}{2}$  inch diameter and about 42 inches long. The long arm of the siphon was immersed in a vessel of water so much that the other had a length of only 4 inches. To this short arm was attached the India-rubber tube to be tested.

A series of six similar glass tubes was placed in a battery on a vessel of water, each tube being furnished with a caoutchouc tube 19.7 inches long, but of different diameters and composition.

No. of Series.	Material of Tube Tested.	Interior Diameter Inch.	Exterior Diameter Inch.	Thickness of Wall Inch.	Volume of Caoutchouc, Cubic Inch.
I	Black rubber.....	0.139	0.238	0.049	0.61
II	Black rubber.....	0.197	0.394	0.098	1.83
III	Common gray.....	0.354	0.553	0.100	2.81
IV	Common red.....	0.354	0.553	0.100	2.81
V	Heavy red.....	0.315	0.669	0.177	5.31
VI	Heavy black.....	0.315	0.630	0.157	4.58

To fill these tubes with illuminating gas, the gas was passed in by the Caoutchouc tube and allowed to stand over the water for ten minutes, so as to almost entirely expel the air; in every case the same method of operation was used with each of the six tubes. Hence we may suppose they were subjected to the same conditions. To close them the same method was used with the finger partly immersed in the water, while another person put into the India-rubber tube the end of a glass rod well greased.

The experiments thus conducted gave the following results at the end of the twentieth day:

No. of Experiment	Depression* at end of 20 Days, Inches.	Maximum Depression was of Inches.	Depression was At End of Days.	Per Cent. of Gas Disappeared at End of 20th Day.
I.....	2.977	2.977	20	56.0
II.....	5.206	5.245	24	47.7
III.....	3.858	6.476	96	32.0
IV.....	5.905	6.144	31	50.0
V.....	5.206	6.066	52	47.7
VI.....	3.977	7.128	52†	34.6

\* I call depression the distance of the liquid in the long arm below the level of the water in the vessel.

† The experiment with tube No. 6 had to be stopped as the liquid in the tube had passed the bend of the siphon and entered into the Caoutchouc tube.

So that, based on the results of the measured depressions on the twentieth day, the Caoutchouc tubes used may be arranged as follows, the most permeable first—1, 4, 2, 5, 6, 3; 5 and 2 being equally so.

The depressions having attained their maximum after a very

\* Translated from the *Bulletin of the Industrial Society of Mulhouse for the American Gas Light Journal.*

variable length of time, I carried on the experiments for two years to ascertain what would happen; as, for example, if an entrance of air would occur, and, in this case, at the end of how much time the depression approached 0. Here is the table:

Number of Series.	Maximum Depression, Inches.	Depression at End of Experiment, Inches.	Difference in Inches.	This Lower-Effectuated in Days.*	One-tenth, Inch, in Days.
I.....	2.977	2.283	.694	605	87.2
II.....	5.245	.315	4.930	541	10.9
III.....	6.476	4.764	1.712	477	27.9
IV.....	6.144	.834	5.310	540	10.2
V.....	6.066	2.010	4.056	512	12.6

\* This difference between the number of days when the depression approached 0 will be inferred from that of the maximum of depression requiring such unequal times to produce a like depression (see Table 2) and as the experiment was stopped only as the maximum was reached.

From this view of the sequence of depression we may deduce the following order:

IV, II, V, III, I.

My experiments were terminated and collated when the new bibliographic researches on this subject led me to a paper by Mr. K. Zulkowsky in the *Berichte der Deutschen Chemiker Gesellschaft* (1872, p. 759) and entitled, "Influence of Caoutchouc Tubes on the Illuminating Power of Gas Passing through Them." The author experimented in a different way from mine, and concluded that there was an absorption of gas by the Caoutchouc. He determined that the rubber increased in weight by its contact with the gas, and on submitting the tubing to the action of a vacuum it gave up a certain portion of the gas so absorbed.

During the research I have repeated some of the experiments to control results obtained. I give an instance of how experience has been obtained:

Two of the same tubes which had served me through all the tests had been connected with new and similar rubber tubes; that is to say, they had been cut similarly and had naturally the same length. They had both been filled with gas as related previously, but one of them had been left in contact with the air, while the other was kept immersed in water.

The depression noticed every time was, at the end of fourteen days, 31.5 inches with the tube which had been exposed to the air, and of 26.4 inches with the tube immersed in water.

These last results have been repeated several times, and on several samples of Caoutchouc. The results found always showed a stronger depression for the tube exposed to the air.

*Determination of the Ash of the Tubes.*—It seemed to me interesting to examine whether the classification of Caoutchouc tubes (Table II.) presented a relation to the quantity of fixed matter contained in them. To this end I determined the ash by incineration, and was thus able to establish three very distinct classes of Caoutchouc tubes, as follows:

Black, containing from 0.5 to 1.5 per cent.
Red, " " 11.0 " 12.0 "
Gray, " " 52.0 " 55.0 "

Comparing these figures with the classification of Table II, we see that the Caoutchoucs having caused the greatest depression are those which contain the least fixed matter—black Caoutchouc—and those which caused the least depression are those which contain the largest quantity—gray Caoutchouc—red Caoutchouc being between the other two.

*Conclusions.*—When illuminating gas passes through, or is in contact with, a Caoutchouc tube there occurs absorption and

diffusion, but more of absorption, as has been shown by Mr. Zulkowsky in the paper cited.

Practically, if required to make a choice of Caoutchouc tubes, destined to carry gas to illuminating apparatus, we have a choice of two methods of testing—incineration or the siphon tube. These two methods lead to the same result. We will then select that tube containing the most fixed matter, or that which will give the longest usage before being rejected on account of the intolerable odor which it gives off in the room. The black Caoutchoucs, which are the most expensive, are those which, because of the odors they give off, allow of the shortest use. I recommend, then, the employment of gray Caoutchouc, and particularly the gray with a small diameter, say 0.157 inch interior and 0.315 inch exterior, which naturally presenting a least weight of Caoutchouc to the foot, will absorb less gas and give off less odor.

#### A PIONEER IN RUBBER SHOES.

MR. CHARLES A. ENSIGN, whose death was chronicled in the September issue of THE INDIA-RUBBER WORLD, was for many years very prominently identified with the rubber shoe interests of the United States, and in no small measure assisted in their development. Mr. Ensign was born at Silver Lake, Conn., nearly seventy-five years ago. His first venture in business was as a custom leather boot and shoe maker in Hartford, Conn., and he soon had the reputation of making the best goods of any one in the city. His attention being called to rubber footwear, he connected himself with the Wales-Goodyear Rubber Co. of Naugatuck, Conn., with whom he remained for twenty-five years. He resigned his position in 1880, and accepted a position under a five years' contract with the Boston Rubber Shoe Co., his office being that of general expert. After two years of arduous work his health failing he was forced to resign this position and take a long rest. He began this vacation, the first of his life, by taking a Raymond excursion to California. Returning much improved in health, he associated himself with the American Rubber Co., doing expert work, and a little later with the Candee Rubber Co., with whom he remained for three years. Leaving this position he became a free-lance in the rubber trade, and was consulted by prominent shoe factories almost constantly, having been expert not only for the companies named, but for the National, the L. D. Smith, and others. Among other things he installed a rubber varnish plant for a large varnish maker in New York, and was the means of their building up a fine business in that line. About the time that his health failed he bought a fine place at Hockanum, Conn., and spent much of his time there as a gentleman farmer. He also designed a sloop yacht, which he had built under his own supervision at Bay Ridge, L. I., and spent most of his time for two summers cruising in the waters about New York.

Mr. Ensign, during his long connection with the rubber footwear business, was the inventor of many machines and processes

that are still in use. The piping machine which automatically cuts the toe-strips for the shoes in any length and width, laying them in sheets ready for booking, was one of his most ingenious and notable inventions. He also produced a cording machine for arctics which lays a fine cord in a strip of piping, folds it over, and reels it up ready for use. Further than this, he was the inventor of the arctic, and it is interesting to note that in appreciation of this, Mr. T. C. Wales made him a present of \$2500.

Mr. Ensign was an old-fashioned, Andrew Jackson Democrat, fond of argument, witty, a good story teller, and a man who was exceedingly well read. During his long experience in the rubber trade he kept careful records of matters of importance in the way of compounds, suggestions, and possible inventions, and willed the whole of this valuable material to W. B. Kinsley, the superintendent of the Malden Last Co., who for years had been a protégé of his.

#### THE NEW "MOLLENDO" RUBBER.

REPORTS of the India-rubber market in Liverpool, are beginning to contain frequent mention of Mollendo rubber, graded there as "fine," "entrefine," and "negroheads," which are the classifications used in England for Pará gum. Two years ago THE INDIA RUBBER WORLD published a statement with regard to the shipment of India-rubber from Mollendo, a seaport of Peru, connected by rail with Lake Titicaca and thus with the headwaters of the Beni river, in Bolivia. At the same time a British consular report was quoted to the effect that the rubber exported from Mollendo had been gathered by the Beni Rubber Co., a concern of which, though incorporated under the laws of New York state, little is known in the American rubber trade. Two recent circulars from a Liverpool house contained these items:

[From August 1 to 15.] Mollendo fine has been offered in larger quantities than usual, about 90 bales having come under the hammer. While 3s. 2½d. to 3s. 3d. was paid a few days ago, the last sales were made at 3s. 3½d. for biscuits and sheets.

[From August 15 to 31.] Mollendo has again showed more enquiry, and over 100 bales have changed hands at 3s. 2¾d. to 3s. 3½d. for fine, and 3s. 2¼d. for entrefine. This grade also shows a slight decline.

The imports of Mollendo rubber at Liverpool during August amounted to 5 tons. There were also reports of transactions in Mollendo "negroheads" in the London market. For a grade of rubber never heard of until a very recent date, Mollendo is coming forward in very respectable quantities, and it is possible that Bolivia may yet yield a large amount of gum from the districts more conveniently situated with regard to the Peruvian seaboard than to the Amazon via the obstructed Madeira.

It is worthy of note that the prices quoted above ranged about 2d. @ 2¾d. per pound below the corresponding grades of islands fine Pará for the same dates as published in THE INDIA RUBBER WORLD.



CHARLES A. ENSIGN.

## THE INDIA-RUBBER INDUSTRY IN EUROPE.

THE guaranteeing of mechanical rubber goods has been a source of annoyance to manufacturers in Germany no less than in the United States. *Die Gummi-Zeitung* (Dresden) says that it is "the weak point in the whole rubber industry," and that it is a "detrimental and dangerous means of competition, which is without equal in misleading purchasers." It seems, however, that the German trade is determined to lessen, if possible, the evils of this system. A circular has been issued, signed by thirty India-rubber manufacturers, addressed to the twenty Prussian railroad corporations, the ten state railroads, and sixty-eight private railroads in Germany, with a view to restricting the time limit of guarantees on their products. The circular reads:

"The undersigned firms have the honor to respectfully call your attention to the fact that, from data at hand, it will in future be possible to offer bids for steam hose, only with a guarantee for one year (one heating period), against such defects as are chargeable to inferior material or careless workmanship. Please arrange accordingly."

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TOO MUCH PUBLICITY.—As readers of THE INDIA RUBBER WORLD are aware, it has been the practice of public companies in England and on the continent to make known many details of their business which are not looked for in the reports to stockholders of manufacturing corporations in the United States. An illustration of this difference may be had by comparing the published reports of the United States Rubber Co., for example, with those of the India-Rubber, Gutta-Percha, and Telegraph-Works Co., Limited. But of late there has been an observable tendency on the part of the directors of some of the companies abroad to withhold particulars which formerly were made public without reserve, and some stockholder at each annual meeting is certain to ask for an explanation. Recently an extraordinary general meeting of the English company above named was held in the city of London, for the purpose of amending the articles of association. Objection was made on the ground that the proposed new articles did not make obligatory the furnishing to the shareholders of as full particulars regarding the company's business as they had received in the past, when Chairman Gray explained that it was necessary to make the suggested alterations in order to prevent competitors from obtaining information about the company's business which it was desirable to keep secret. The amendments were then agreed to, with only one dissenting voice.

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NOT IMMORAL IN GERMANY.—The question as to whether the distribution of price-lists of hygienic rubber articles is circulating obscene literature was brought for decision lately before Part V of the supreme court I, in Berlin. The district court had decided in the affirmative and imposed a fine of 50 marks. The court took the stand that the price-list was conducive to immoral thoughts in young people. On these grounds it declared the publication obscene, a fact of which the defendant no doubt had been cognizant. The defendant appealed from this decision, and his attorney, Dr. Crossmann, argued that the Bible contained passages which were capable of instilling immoral ideas, and that the distribution of the Bible on that account was not unlawful and punishable. Not the publication itself was the cause of immoral thoughts, but the immoral sentiment of the reader, and he who read the price-list without immoral tendencies could see nothing ob-

jectionable therein. The court coincided with this view and ordered an acquittal.

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RECLAIMED RUBBER.—The editor of *The India-Rubber Journal* (London) remarks in his paper that it is strange that old rubbers are shipped from Europe to America to be "reclaimed," and in that state are returned and largely sold in England. He is told by a British manufacturer that the reclaimers over there seem not to have fallen upon the right "knack" of treating old rubbers, and that the American product "is very much superior to any other make. It has a great deal more life to it, and works up much better than any of English origin." At the same time, there must be a lot of English reclaimed rubber sold, since several firms are producing good quantities, and, as our contemporary remarks, "they are not making it merely for the pleasure of doing so."

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THE BERLIN TRADE DULL.—In the official report of the Berlin board of trade for the past year is the following reference to the India-rubber industry: "All kinds of crude India-rubber were held at an average from 10 to 15 per cent. higher than in the previous year, while the cotton and linen stuffs used in the manufacture of rubber goods were continually on an upward tendency. Chemicals remained unchanged in price, and also coal; there was no change in the price of labor, and yet the selling prices of rubber goods for all mechanical purposes declined. The newly-established factories have sought to place their products direct with the consumer, thereby forcing the dealer, in order to compete with these small manufacturers, to continually take goods of a lower quality, on which there is scarcely any profit, thus rendering the whole manufacturing business unprofitable. Scarcely any influence was expected from the new commercial treaties in the India-rubber industry, as it has been almost entirely ignored in them. A small advance in the volume of sales for the year was noticed, but the keen competition forced down prices, which was not done without injury to the quality of the goods."

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NO REASON HERE FOR COMPLAINT.—The Avon India-Rubber Co., Limited, whose works are at Melksham, near London, have had for some time past the contracts for supplying the British admiralty with the rubber goods required for the navy, not only to the English dockyards, but to the dockyards of India, Malta, and Jamaica. During the year three new buildings have been added to their plant, accompanied by an increase in their working force. A movement has been started among the employés for the organization of a sick-benefit fund.

The Fowler-Waring Cables Co., Limited, after several years of experience in cable-making, under various patents held by them, have lately become their own rubber-manufacturers. On July 15, at their works at North Woolwich, on the Thames, there was a formal opening of their new rubber department, where all the manipulation of the gum, from its arrival in a raw state, will be carried on. Two work-rooms are devoted to this department, measuring respectively 121 x 41 and 121 x 51 feet. The superintendent of the department is William Jones, connected formerly with the Clyde Rubber Co. The power requirements for the new plant are supplied by a 250-horse-power engine.

The Telegraph Construction and Maintenance Co., Limited (London), at their recent half-yearly general meeting, declared



the usual *interim* dividend of 125. per share, being at the rate of 10 per cent. per year. Although they had not carried out any large contracts so far this year, they had received orders from various companies and governments for several hundred miles of cables.

\* \* \*

**GROWTH OF THE FRENCH TRADE.**—The volume of transactions in India-rubber in France during the first six months of 1896 exceeded that of any former year, with respect both to raw materials and to manufactures. The imports of crude rubber exceeded the exports by 3,537,480 pounds, against only 1,667,820 pounds for the same period of 1895, and 2,805,000 pounds for the first half of 1894. The direct imports from Pará were much larger than in any former year. The figures are larger for both imports and exports of rubber goods, almost the only item showing a decline being in respect to waterproof clothing,

of which the exports amounted in 1896 to the value of \$16,150, against \$22,525 in 1895, and \$31,875 in 1894. More rubber footwear was imported, and more was exported, also. The value of exports of rubber goods of French manufacture, for the first six months of each year, amounted to \$878,600 in 1896, to \$708,600 in 1895, and to \$688,400 in 1894.

\* \* \*

**BUSINESS CHANGE.**—The firm of Froreich & Co., manufacturers of mechanical, surgical, and other India-rubber goods, at Prague, has passed into the hands of Joseph Tick, a nephew of the owner hitherto, the former associate of the firm, Emil Lech, having died in January last. Mr. Tick gained his experience with the above firm, and also with J. Odelga, of Vienna, and with C. Kläss, at Cologne o/R. He will continue the business on the former principles, free from all incumbrances under the old firm name.

## BRIEF ABSTRACTS OF RECENT RUBBER PATENTS.

THE list of rubber patents for the last month is in many respects an exceedingly interesting one. As usual the most thought seems to have been put on pneumatic tires, and incidentally some of the inventions bear the impress of novelty rather than usefulness. The minor patents in this line embrace a non-puncturable shield of metal strips, a tire with interior forcing rings, another reinforced with cork, and one filled with feathers. Just what this featherbed arrangement is going to accomplish is a conundrum. It may be however that in case of puncture the feathers will be blown in the orifice and enable the rider to get home safely. The notable tire patents are one by Robert Cowen, superintendent of the Boston Hose and Rubber Co., which covers a very interesting process for the manufacture of tires. Another process patent for one-tube tires is taken out by E. W. Young, who assigns it to Morgan & Wright, Chicago. Charles L. Pepper of Spaulding & Pepper Co., of Chicopee Falls, Mass., is the patentee of an ingenious yet simple repair tool.

The druggists' sundries line presents little that is new, the bulk of the patents being on syringes and syringe nozzles. One inventor, however, through a flight of genius brings out a fountain tooth brush which forces the dentrifice upon the brush part while the teeth are being cleansed.

In mechanical rubber goods, Mr. H. O. Canfield, of Bridgeport, Conn., is the assignee of a new kind of basin plug which looks as if it might be valuable.

In sporting goods an improvement on a very popular type of punching bag is to be noted. T. S. Buck, a well known manufacturer of rubber hand stamps, brings out another type of stamp, while Mr. Caldwell, of the American Tubing and Webbing Co., is the inventor of still another gas tip.

A number of interesting trade marks are added to the general list, the most prominent being one for fossil earth, by George A. Alden & Co., the well-known rubber importers of Boston, while Deming & Co., of Salem, Ohio, copyright their Bordeaux spraying nozzle, and the Pleuger & Henger Mfg. Co., of St. Louis, do the same for their well-known Cactus sprinkler. Another healing fluid for tire punctures is copyrighted under the evanescent name of "Puncture Nit."

A brief review of the patents is as follows:

### TIRES.

No. 565,258.—Pneumatic Tire. Fred. M. Brown and Edward J. Brosnan, Stafford, Conn., assignors of one-third to Charles L. Johnson, same place.

A pneumatic tire of any suitable material, provided with a

non-puncturable shield consisting of two thin sheet-metal strips, one within the other, each provided with suitable central perforations, those of one strip being arranged alternately with those of the other.

No. 565,413.—Implement for repairing Pneumatic Tires. Charles L. Pepper, Chicopee Falls, Mass., assignor to the Spaulding & Pepper Co., same place.

An implement for inserting repair plugs into pneumatic tires, the jaws thereof having oppositely-arranged concave grooves therein, each jaw having a handle integral therewith, which jaw and handle parts are pivotally united, combined with a flat-faced yoke pivotally connected by one end to the extremity of one of the handles, and having a sliding engagement by its free end with the opposite handle of the implement, whereby by the movement of the yoke, the gripping force of the jaws is gradually increased.

No. 565,461.—Bicycle Tire. Richard K. Gregory, Greensborough, N. C.

The combination with a pneumatic tire of an inner elastic hollow forcing ring formed from a blank having transverse integral ridges formed at regular intervals on the inner face and rectangular integral shoulders projecting therefrom at right angles to the face of the blank, the shoulders or projections being of sufficient length to extend nearly across the diameter of the ring made from the blank.

No. 565,611.—Vehicle Wheel Tire. Hugh J. Dykes, Peralta, Cal.

A vehicle-wheel tire consisting of a body composed of cork circumferentially grooved, a tie line seated in the groove whereby the cork is held to the rim, an independent cushion circumferentially directed and seated in the groove and a covering over the cushion and body.

No. 565,825.—Cap for Bicycle-Valves. David Basch, New York, N. Y.

A suction-cap for bicycle valves, constructed of rubber and comprising a tubular body closed at one end, and a cup formed at the open end of the body, the concaved face of the cup being its outer face.

No. 565,854.—Process of Manufacturing Tires. Robert Cowen, Cambridge, Mass., assignor to the Boston Woven Hose and Rubber Co., Boston, Mass.

The method of manufacturing pneumatic tires which consists in building up an endless tube of or containing unvulcanized rubber, covering the tread surface of the unvulcanized tube with a fabric adapted to make fine indentations therein, temporarily securing the tread-covering fabric to impress the latter into and to form indentations in the former, vulcanizing the tube while so covered and inflated, then removing the temporary covering to leave the complete vulcanized tube ready for use.

No. 566,113.—Pneumatic Tire. Ernest W. Young, Austin, Ill., assignor to the Morgan & Wright, Chicago, Ill.

The method of producing one-tube pneumatic tires, consisting in forming and vulcanizing upon an annular mandrel and endless seamless tubular structure composed of rubber and fabric, opening such structure to a limited extent and causing the mandrel to part from the same, by way of such limited opening, introducing a tubular rubber layer through the limited opening and uniting the ends so as to form an endless annular tubular rubber layer within the tubular structure, cementing the outer side of the tubular layer to the inner side of the tubular structure wherein it has been so arranged, and compressing together the cemented sides by inflation.

No. 566,247.—Bicycle-tire. Charles T. Thompson, Philadelphia, Pa.

The combination with a pneumatic tire of an internal filling of feathers.

#### DRUGGISTS' SUNDRIES.

No. 565,273.—Fountain Tooth-brush. Fred. C. Howe, Worcester, Mass.

The combination with the hollow handle, having a dentrifice-reservoir and a valve, of the brush, having bristles and a body, connected to the handle and having a trough-shaped cavity on its face adjacent to the bristles, and a duct leading from the valve to the cavity, whereby dentrifice can be collected in the cavity from the reservoir and held therein for use.

No. 565,386.—Rectal Irrigating-Dilator. Peter C. Meengs, Coopersville, Mich.

The combination, in a rectal-splint, of a central tube having a bulb at its lower end, an annular perforated tube around its upper end, a guard a short distance from its upper end, an expansible bulb encircling it between the annular tube and the guard, a syringe connected by a flexible pipe with the annular tube, and an inflating syringe connected with the bulb; with a fold turned in and down in the upper end of the central tube.

No. 565,480.—Syringe. James A. Maloney, Washington, D. C., assignor to Benjamin S. Minor, same place.

A syringe comprising a tube or cylinder having a nozzle at one end, and an orificed plug or cap at its opposite end, a bulb secured on the capped or plugged end, and a loose piston consisting of a hollow cylinder closed at the end nearest the nozzle, and open at its opposite end.

No. 565,516.—Syringe. William P. Shattuck, Minneapolis, Minn.

A syringe comprising the main portion or receptacle, provided with a reduced extension having an opening in its end, a valve arranged at the outer end of the extension to close the opening, and means for opening the valve after insertion to permit the use of the syringe, and for closing the valve after use to prevent the liquid that has accumulated in the extension from running out while the syringe is being removed.

No. 565,928.—Syringe-Nozzle. Henry P. Scott, Kansas City, Mo.

In a syringe, the combination with a nozzle having a series of openings in its upper end near its periphery, of a series of longitudinal arms arranged around the nozzle and having their upper ends pivoted in the openings, a divided spring-collar encircling the nozzle and to which the lower ends of the arms are secured, and having an inwardly-extending projection engaged with a groove in the nozzle, whereby circumferential movement of the collar upon the nozzle is permitted but longitudinal movement thereon prevented unless the collar is expanded.

#### MECHANICAL GOODS.

No. 565,409.—Basin-plug. Henry C. Freshour, Bridgeport, Conn., assignor to Henry O. Canfield, same place.

The combination with a molded rubber plug having an opening through it, of a stud adapted to pass through the opening and having a head adapted to lie on the under side of the plug to prevent the latter from being drawn out, and a shoulder which engages the upper side of the plug, the body of the stud above the shoulder being tapered.

No. 565,698.—Hose-clamp. Charles Sparks, Pacific Grove, Cal., assignor of one-half to J. H. Plumb and J. S. Meteer, same place.

A clamp, consisting of a band provided at its extremities with interlocking intermediate and lateral tongues having tapered extremities and transversely-aligned key-seats, the extremities of the tongues being adapted to underlap the shoulders arranged respectively at the bases of the tongues, the tongues being formed by folding the extremities of the blank inwardly upon themselves and permanently securing them by fastening devices located, respectively, upon opposite sides of the key-seats, and a tapered key engaging the seats.

#### SPORTING GOODS.

No. 565,747.—Punching Bag. Elsworth A. Hawthorne, Philadelphia, and Horace Sheble, Melrose, Pa.

The combination of a punching bag with a supporting rod or standard upon which the bag is mounted so that it is retained vertically, but is free to turn or spin around upon the supporting-rod when a side blow is delivered upon it.

#### MISCELLANEOUS.

No. 565,038.—Weather-Strip. Clifford Saville, New York, N. Y., assignor to William Rigby, Hackensack, N. J.

A weather strip consisting wholly of flexibly vulcanized rubber and comprising a flat portion having an inwardly-beveled cushioning edge and a supporting portion which is rounding or convex and is provided in its top surface with a central longitudinal indentation or nail-guide, the whole forming an integral structure of rubber.

No. 565,327.—Printing Stamp. Taylor S. Buck, Brooklyn, N. Y.

In a printing stamp, an elastic type-block holder for separable type-blocks formed with a recess and provided with marginal strips of metal, hard rubber, celluloid or other suitable material.

No. 565,332.—Toy for Making Soap Bubbles. Jesse C. Daugherty, Lima, Ohio.

In a soap-bubble and smoke ring former, the combination of a funnel-shaped body portion, a hollow stem connected therewith, a flexible bulb connected with the smaller end of the body portion, and a hollow cap connected with the larger end of the body portion, the cap being provided with a central opening which is conical in form, and the base thereof being directed downwardly and the cap being also provided with curled hair or similar material, which is placed therein.

No. 565,544.—Trousers-Stretcher. Harrison Krane, Douglass and Michael Guider, Cork, Ireland.

Stretchers for distending riding and other breeches, comprising a collapsible breeches shaped air-tight bag provided with an air inlet valve and adapted to be pneumatically inflated, and a brace composed of a disk or plate adapted for engagement with the inflated bag, and buttonhole-tabs secured to the disk and adapted for attachment to the brace-buttons of the breeches.

No. 566,136.—Gas-Tube Tip. Alfred Caldwell, Providence, R. I.

A tip for gas-tubes, comprising an inner tube of rubber and an outer surrounding tube or comparatively rigid material, the interior diameter of the outer tube being somewhat greater than the exterior diameter of the inner tube at its entrance end, the outer tube being provided at one end with an intumed annular flange.

No. 566,195.—Ruler. Percy W. Leavitt, Akron, Ohio.

A ruler provided on its bottom face with a cylindrical elastic cord or string partly embedded therein and extending longitudinally of the ruler.

#### TRADE-MARKS.

No. 28,722.—Cementing and Healing Compound for Rubber Goods, especially Bicycle-tires. Kate Linn, New York, N. Y. Filed July 10, 1896.

Essential feature.—The word "Wizard." Used since June 6, 1896.

No. 28,754.—Fossil earth used in the Manufacture of Rubber Goods. Geo. A. Alden & Co., Boston, Mass. Filed July 14, 1896.

Essential feature.—A monogram composed of the letter "A" and the numeral "1" with the words "Acid Proof" and the word "Opal." Used since June 29, 1896.

No. 28,700.—Spraying-Nozzles. The Deming Co., Salem, Ohio. Filed Dec. 31, 1895.

Essential feature.—The word "Bordeaux" upon the handle of a spraying-nozzle. Used since April 1, 1893.

No. 28,706.—Sprinklers. Fleuger & Henger Manufacturing Company, St. Louis, Mo. Filed July 20, 1896.

Essential feature.—The word "Cactus." Used since June 1, 1891.

No. 28,801.—Compound for Closing Punctures in Pneumatic Tires. The Eagle Chemical Co., Findlay, Ohio. Filed July 23, 1896.

Essential feature.—The compound word "Puncture-Nit." Used since April 1, 1896.

### RUBBER SHOES IN THE RETAIL TRADE.

RUBBERS are about the meanest thing in the shoe store to handle and get any money out of. They must be carried, that's a foregone conclusion, except it be in such latitudes as have no snow and little rain. The vast majority of shoe dealers, be it said, must carry a larger or smaller stock of rubbers. Most of these merchants seem to think, too, that if they carry rubbers they must cut the prices of them also. This is a totally unjustified conclusion. A profit should invariably be made out of rubber traffic. In some towns where the dealers found it impossible to do this when fighting each other they have tried combining by agreement and selling goods at stated prices and made money out of it.

Buying rubbers must be done cautiously. The many styles of shoe toes demand rubbers to fit them, but extremes must be touched with care. Pointed-toe rubbers may be a drug on the market a year hence and it is extremely dangerous to carry them over. Jobbers and manufacturers are both aware of this and will be slow to take chances on these goods. The retailer will be wise to follow suit. This is one class of stock that it will pay to order early because they will be wanted early and jobbers are not going to stock up on them. Neither will manufacturers. Late buyers, therefore, are likely to whistle for their goods.

Says a dealer, "Oh, this 'buy early or you won't get the goods' is an old-timer that is threadbare. There always have been plenty of goods. We buy early and then when our bills are paid and there has been no rubber weather the late buyer is offered a tempting dish of jobbers' odds and ends that are just like our goods, and the auction houses put up a lot of punched goods that the customer can't tell from ours. And these at lower prices. Buy early, nothing."

In spite of this complaint the *Gazette* can say with all sincerity that many of the best and shrewdest merchants buy their rubbers reasonably early. They buy only the best grades in some cases. In others they stock up with firsts, seconds, and they cheapest they can get. Then they sell the goods for what they are and explain the difference in quality and price honestly and sell the customer what he wants.

Last winter a retailer issued a circular and also had notices printed in his local papers explaining the rubber situation. They read something like this:

"The manufacture of rubber boots and shoes in this country is in the hands of a few big corporations which are in thorough accord. They make a first or high grade rubber, which is a really good article and wears well if properly used. They also make a second-grade rubber which is not so good, but will give the money's worth of service if used with a little discretion. Third-grade rubbers are third-grade in quality as

in price. In addition there are a number of brands on the market that rate according to the prices asked and some of them are as near rotten as they could be. What can you expect from a 19 or 25 cent rubber after the maker, the jobber, and the dealer have gotten their profits out of it? Take a pair of 25-cent rubbers. Here are two shoes, each retailed at 12½ cents. The dealer, jobber, and manufacturer will certainly get 2½ cents of this between them. Now think of making this shoe and furnishing the rubber for 10 cents! Crude rubber is selling for 75 cents a pound by the ton, net. How much rubber can there be in that 10 cent shoe? If you want a rubber that will give any wear at all you must buy a good rubber. It is cheaper in the end by 100 per cent. Paying a dollar for a good rubber is economy. It is pretty sure to save you \$5 in doctor's fees."

Then the dealer concluded with a puff of the rubbers he handled, including quotations of cheap stuff, in this style: "We've also got some of the cheap stuff in stock. These rubbers at 19 cents are just as good as anybody's 19 or 20 or 25 cent rubbers. They're the best made for anything like that price, but we are not dishonest—we will not recommend them because they are not goods that an honest dealer can stand back of."

This merchant asserted that this way of putting it did him good. People who didn't believe him and bought the low-priced stuff were quickest to confess that he was right, and he helped his trade through this means. It may be worth a trial by others who mark their goods at a profit, sell them at a profit, do not overstock, and do not cut.—*St. Louis Shoe and Leather Gazette*.

### THE BALATA CROP INCREASING.

IN a recently-published report by the British consul in Dutch Guiana the statement is made that the Balata industry is in a progressive state. Hundreds of British subjects from Berbice, in British Guiana, are employed as "bleeders" of the trees, or as collectors. The gathering of Balata is controlled by laws regulating the method of bleeding the trees. The latter part of 1895 and the first part of 1896, owing to abnormal dryness, were unfavorable to the industry. The amount of the gum exported in recent years was as follows:

	Pounds.
In 1891 .....	73,327
In 1892 .....	265,494
In 1893 .....	210,269
In 1894 .....	238,229
In 1895 .....	294,098

The local price for two years past has been 2 florins per kilogram, equivalent, at 40.2 cents per florin, to about 36 1-6 cents per pound. Most of the gum is exported to the United States.

The latest colonial report for British Guiana shows an increased production of Balata in that colony also, although only 22 "Balata grants" were taken out during the fiscal year 1894-95, as against 77 grants taken out in the preceding year. The value of Balata exports is thus reported:

	£.	s.	d.
In 1893-94 .....	8,283	2	6
In 1894-95 .....	11,483	5	5

It may be noted, however, that the figures here quoted for previous years do not wholly agree with the figures from the same sources previously published.

Balata is beginning to figure in the exports of Venezuela, also. The amount officially reported by the British consul at Caracas, for the fiscal year 1893-94, was 135,062 pounds, of the value of 65,072 bolivars (= \$31,234).



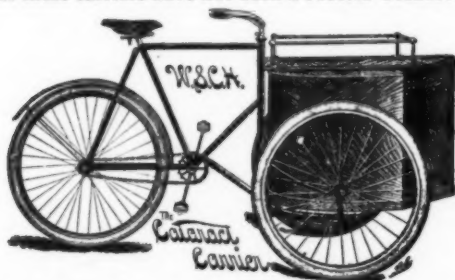
## NEW GOODS AND SPECIALTIES.

## THE ALAMEDA NON PUNCTURE TIRE.

A NOVEL idea for keeping a tire from puncturing consists in making the inner tube larger than the outer covering, so that when inflated it gathers in puckers and folds upon itself under the tread in such a manner as to reduce punctures to a minimum. A strip of silk is cemented along its edges to one side of the inner tube, so as to reduce its diameter to the size of the outer case, thus making it much easier to insert into the air chamber and further than that, causes the folds to develop in the proper place when the tire is inflated. A single tube tire is also made with the same general features about its tread. This is the invention of E. F. Murdock of Oakland, California.

## THE CATARACT PARCEL CARRIER.

THE use of parcel carriers in the cities and large towns has to a degree helped the sale of a heavier type of pneumatic tires. Some of these carriers have not been a success because of me-

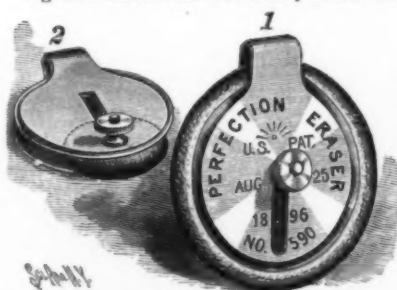


chanical deficiencies. The illustration, however, shows a patent carrier that is rapidly growing in popularity, and that will please tire manufacturers for the reason that each one must be equipped with three well made pneumatic tires. This carrier is manufactured by the Warman-Schub Cycle House, Chicago, Ill.

## A NOVEL ERASER HOLDER.

A SIMPLE device for holding circular rubber erasers, by which the eraser may be securely and firmly held even when worn to a very small size, is represented in the illustration, and has lately been patented. It is an invention that has the merit of being easily understood.

Figure 1 shows the device in position when the eraser is new



and of full size, and Figure 2 when the eraser is greatly-reduced in size, or nearly worn out. The holder has circular thin metal side plates in which are opposing radial slots adapted to carry a head or pin on whose other end is a screw clamping nut. The eraser has axial movement on the pin, and by moving the latter outward the center of the eraser is brought correspondingly near the edge of the side plates. The eraser may be freely turned on the pin and expose every portion of its periphery. Manufactured by the C.V. Hankel Co., 125th street and Park avenue, New York, N.Y.

## RUBBER BUCKETS AS WELL PURIFIERS.

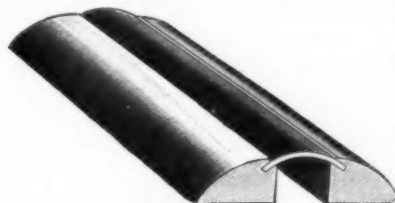
THE rubber pump bucket of course is no new invention, it having been in use for many years. Of late however it has been growing in popularity, for the reason that well water appears to be so much better where certain makes of buckets are used. It is known that a well entirely shut away from the air is apt to contain poor water. A bucket therefore that takes a



certain amount of air down through the water acts as a purifier. What is known as the Mild Purifying Bucket does this so thoroughly that the manufacturers warrant it to purify the water of any well or cistern within ten days. This bucket can be attached to any kind of chain pump, never freezes in the winter, never gets out of order, and not only does it expel all vegetable and animal matter from the water but eradicates waterbugs, water lice and other vermin. The buckets as now made have rounded edges at the top, therefore avoiding any possibility of catching when entering the tube. Manufactured by H. H. Hodell, Cleveland, Ohio.

## BOSLEY'S RUBBER THRESHOLD.

THIS is one of the most approved and effective articles for closing the opening under a door that has recently been placed in the market. It can be adjusted to close any opening in the following manner: One side of the threshold is fastened



to the floor in place of the old one removed, and the rubber between the two sections of wood is forced up until it touches the bottom of the door, then by nailing to

the floor the other wood support the threshold is permanently in place. The rubber used is made of pure sheet, and will stand a great deal of wear, as it is soft and pliable, and will give under the weight of a person when stepping on it, and return to its original position when the weight is removed. Manufactured by the D. W. Bosley Co., Chicago, Ills.

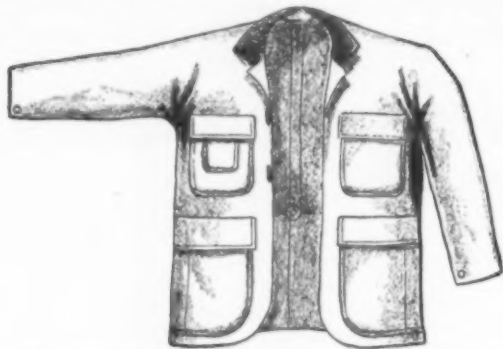
## THE HATCH RUBBER PATCH.

As the illustration shows this is simply a steel spring with a rubber patch. It has been most successfully used for cut or punctured bicycle tires, buggy tires, and even for repairing garden hose. By its use one can repair a tire in a case of ordinary puncture in one minute's time. Manufactured by the Hatch Bicycle Patch Co., 135 Summer street, Boston, Mass.



### THE SEAMLESS SHOULDER-GUNNING COAT.

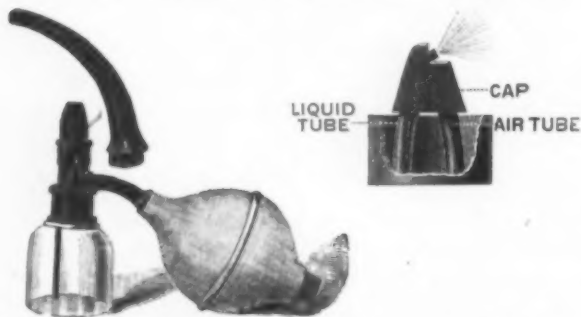
By request we show this coat a second time in this department, as it is especially appropriate to the gunning season now at its height. The coat has many manifest virtues. In the first place it is guaranteed to be absolutely waterproof. The feature about it however that commends it to the sportsmen, and that is novel, is that it gives perfect freedom of movement. There is



no binding about the arms, the weight being distributed well across the shoulders. Gunners will recognize the value of this coat when they know that the arms can be raised in any position without lifting the load in the pockets. The coat is neatly made, with large game bag on the inside, ample pockets, and is finished with a neat corduroy collar. It is practical, comfortable, and even stylish. Manufactured by John R. Farrell & Co., 765 Washington street, Boston, Mass.

### THE "PARK" VASELINE ATOMIZER.

ONE trouble frequently experienced with vaseline-atomizers is the displacement of the liquid-tube or the air-tube, which interferes with the satisfactory working of the atomizer. This is liable to happen in spite of the most careful adjustment of the tubes before the atomizer leaves the manufacturer. In order to overcome this difficulty a new invention has been brought out, embracing a hard-rubber cap, designed to fit over the ends of the two tubes in such a manner as to prevent the



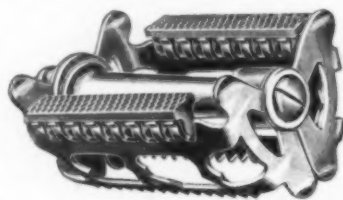
atomizer from being thrown out of adjustment. This cap is removable and easily cleaned, which is not the case with all vaseline-atomizers. The details of the construction of this device will be apparent from an inspection of the upper portion of the accompanying illustration. This feature, for which a United States patent was granted last month, was first utilized in the "Park" vaseline-atomizer, which is designed likewise for spraying heavy oils of any kind. This atomizer is fitted with detachable throat and nasal tubes of hard rubber, or it can be obtained with either tube alone at a lower price. Manufactured for Fox, Fultz & Co., No. 52 Park place, New York.

### THE LAVIGNE PEDAL.

A NOVELTY of unusual merit in the pedal line, which has been patented in the United States and foreign countries, consists of side-plates constructed with rat-trap on one side and rubber on the other. The plates are hinged on the axle of the pedal, and may be converted from a rat-trap to a rubber pedal, or vice versa, instantaneously, by the simple upward pressure of the thumb and forefinger. As the center of gravity changes with the shift of the pedals, another most important feature is gained, namely, that the gripping surface is horizontal in all positions of the crank. These points appeal at once to the bicycle riders, doing away with the present method, in



combination pedals, of fastening the rubbers by means of plates and screws, and also the possibility of not finding the gripping surface when regaining foot hold on the pedals. None but the best material is used in construction, and the manufacturers state that no expense will be spared to make the pedals of the

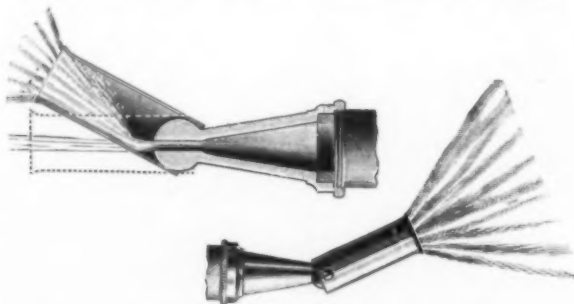


highest quality of workmanship and finish. Each detail of construction has been carefully studied, and the experience of other manufacturers has been used to make them as near perfect as possible. It

is the intention of the owners of this pedal to sell shop rights to the firms already equipped for the manufacture of pedals, who may wish to add the points of this pedal to theirs. Manufactured by Lavigne & Scott, New Haven, Conn.

### THE SHOWER LAWN SPRINKLER.

THIS sprinkler is exceedingly simple and very easily operated. A light pressure of the thumb makes the change instantly from a heavy solid stream to a fine spray or the reverse. The flow of water is not checked at all when the spray is used, the



stream being simply broken up into drops like rain. The spraying tube which works on a ball and socket joint holds itself in whatever position it is placed. The sprinkler has no springs nor detachable parts to operate or to get out of order. Manufactured by the Peninsula Brass Co., Grand Rapids, Mich.

## THE SAGER PNEUMATIC SADDLE.

THIS saddle of course depends upon rubber to hold the air, but is so made with separate chambers that it cannot roll about beneath the rider. Two circular holes in the rear portion of the saddle serve to keep the seat cool, and contribute to aid the rider to maintain a correct position. In this saddle the best quality of rubber tubing is used. The leather covering is carefully formed to the shape, which after repeated trials has been found the most satisfactory, and being laced on can be easily removed. By reversing the spring a forward or back adjustment is given, a feature of value when the direct post is used. The weight of the saddle is 20 ounces. It is made in two patterns. Style "O" is long and narrow, while "O L" is that shown in the illustration. Manufactured by the Sager Mfg. Co., Rochester, N. Y.



## RUBBER APRONS FOR THE LABORATORY.

THE illustration shows a rubber article that is quite popular among dentists for either patient or operator and that is also having a very general use in laboratory work. It is made of a



fine quality of rubber cloth, is one yard long, and one yard wide at the bottom. It is sold generally through the dental supply houses, and is manufactured by Samuel A. Crocker & Co., Cincinnati, Ohio.

## THE AIR CUSHION POCKET STAMP.

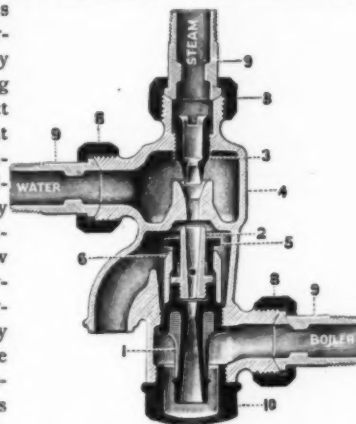
THE pneumatic cushion stamp has been already illustrated in a general way in THE INDIA RUBBER WORLD and its advantages described. The illustration shows a very neat stamp which can easily be carried in the pocket, and which has the virtue of the larger pneumatic stamps in that it will print legibly upon almost any surface, and further than this, the rubber being protected by an impervious skin is in no way affected by the ink. These air cushions, by the way, never puncture. Manufactured by the R. H. Smith Mfg. Co., Springfield, Mass.



## ADAPTED TO RUBBER-FACTORY WORK.

THE illustration shows a sectional view of a new automatic restarting injector which is especially adapted for constant and reliable service. These injectors are made by Wm. Sellers & Co., Philadelphia, are the most perfect boiler feeders known, and are the result of many years of careful and scientific study and experiment to determine the proportions and shapes that will give the widest possible range, with the most economical consumption of steam and at the same time be perfectly reliable. Their system of manufacture is such that the pipe

sizes and proportions having once been determined, they are strictly maintained by having parts made to a perfect system of gauges, so that they are thoroughly interchangeable and, although this injector may have been in service until quite well worn, a new tube or part can be furnished that will fit perfectly and give exactly the same results as the original. This new restarting injector is thoroughly automatic in



every respect and has been designed with a view of having as few parts as possible. There are no levers, no fittings except ordinary globe valves are required, it is very easily repaired, only a screw-driver and a monkey wrench being required to take it apart when necessary to clean or renew parts. In designing this injector particular care has been exercised to obtain a wide range, to enable it to work hot water and to get maximum lift. It will be noticed that there is no valve or other obstruction in the overflow, so that when the injector is out of service, if the steam supply valve should leak, there is no danger of heating the water in the service pipe to a very high temperature. Fourteen sizes are made, covering a range of H.-P. from 2 to 400. This injector is meeting with great favor from steam users and is, we believe, destined to become the leader in the market. The famous steam appliance and rubber supply house of Jenkins Brothers, New York, are the selling agents of these goods.

## LUND PNEUMATIC BICYCLE GRIP.

THE desirability of extending the anti-vibratory principle in the construction of bicycles as far as possible has led to the invention of a device based upon this principle for use on the handle-bar, namely, a pneumatic grip, of which an illustration is shown herewith. It has often been remarked by wheelmen that, after a long ride, not only the hands, but the arms have experienced a numb feeling that was due entirely to the jolting and jarring that those members were subjected to while partly supporting the weight of the body. In recommendation of this device it is pointed out that, being an air cushion, yielding under pressure of hand, it does not restrict circulation, therefore preventing numbness of fingers and forearms. It absorbs perspiration and absolutely removes vibration at a point of contact. By its use





the most delicate hand will not become blistered or calloused. It is made in various colors, in sizes of  $\frac{3}{4}$  and  $\frac{1}{2}$  inch, at a retail price of \$2 per pair. Manufactured by the Lund Pneumatic Grip Co., Rochester, N. Y.

### THE CLINGTIGHT SANDAL.

THE INDIA RUBBER WORLD has already made mention of the new sandal that has so delighted the shoe trade in and about Boston. The illustration herewith published gives an excellent idea of the article when fitted to a lady's shoe. In



brief the "clingtight" is a foothold without the heel strap. By an ingenious manner of fitting it covers the sole of the shoe, and not only stays there in spite of mud and the tendency to "creep," but it allows no

dampness to get in at any point. The shoe is neat, compact, and pretty. It can be carried in the pocket if desired, and is just the thing for city wear for ladies, gentlemen, or children. Manufactured by C. J. Bailey, 22 Boylston street, Boston, who is the inventor and patentee.

### THE DAVIDSON DRAINAGE TUBING.

THE use of a high grade of rubber tubing in surgery has for several years been largely on the increase. The Davidson Rubber Co. (Boston) are now making a pure gum or tan drainage tubing, which is fully up to the high standard of their best goods. This tubing is hand-made, the sizes being exact, running from 8 to 40 French gage, and is sold in 12-foot lengths. These tubes, by the way, are thoroughly antiseptic, the small amount of sulphur that is in them, so the surgeons claim, being really a help to the antiseptic qualities.

### THE "DELUGE" SYRINGE.

THIS is a new article, for which a patent is pending, and which possesses some elements of novelty. The vaginal tube is made of soft rubber and hard rubber. The soft rubber part is collapsible and expandable, as the accompanying illustration is designed to show. It is perforated with a great many very small holes, and in a normal condition is perfectly flat and easily adjusted for use.

When water is forced into the tube, the soft rubber part of the tube expands to its fullest capacity before the fluid will find an outlet. The expansion of the tube, in its turn, dilates the parts to be cleansed. When this is accomplished, the water sprays in every direction through the small openings with which the tube is punctured, and searches out any secretions that may have found a lodging-place, and that of necessity are loosened by the expansion, and are washed away by the flood of water. The "Deluge" syringe is offered to the trade in a neat hard-wood box, with three hard-rubber tubes in addition to the one described. It is the invention of Victor C. Vant Woud, and is manufactured by the Vant Woud Rubber Co., No. 47 Warren street, New York.



### A NOVEL TIRE.

A NEW idea in bicycle tires consists of a series of steel springs fastened to the rim at equal distances. The springs are made with the finest steel wire which is bent in the form of a circle with the outer side curving inwardly, thus forming a groove around the circumference of the tire. In this groove is fitted a band of metal to which a rubber tread is cemented. The groove prevents the rubber tread from slipping to either side by slits cut in the metal band. This tire is patented by N. D. Coe, New Haven, Conn.

### THE AMERICAN CAPPED TOE.

THE two great *desiderata* in the making of rubber boots and shoes are wear and looks. The more wear and looks a manufacturer can get into rubber footwear, the more he will hit the public wants and the greater trade he will get. The American Rubber Co., whose president is Robert D. Evans, who is also president of the United States Rubber Co., has always been noted for its enterprising and progressive spirit. It has recently gotten out



a new rubber with a cap over the toe, which tends to give the rubber increased service and increased beauty. The cap has an ornamental design and gives the rubber very much the appearance of a patent leather shoe, and inasmuch as the toe is the most exposed part of the rubber, its double thickness at that point considerably increases the rubber's wear. Here are a couple of cuts which serve to give an idea of the appearance of the American capped toe rubber.

### THE "LEAGUE" EMBOSSED TIRE.

THE well-known "League" single-tube bicycle-tire has been brought out this season with a new feature, designed to prevent slipping, and called the "embossed tread." The accompanying illustration will give some idea of the appearance of



the tire as thus constructed. The embossed feature prevents the slipping of the tire both sidewise and lengthwise, and gives a more secure contact with the ground, by reason of which

bicyclists claim that greater speed can be attained. The "League" tire is still supplied with the smooth tread, and there is no difference in the fabric or in the rubber used in the construction of the two styles of tire. The "League" tire is built upon a peculiarly-woven fabric, of such a nature as not to be readily punctured, and for the same reason it may be repaired readily. Manufactured by the New York Belting and Packing Co., Limited, No. 25 Park place, New York.

#### THE RUBBER GOODS WANTED IN SCANDINAVIA.

TO THE EDITOR OF THE INDIA RUBBER WORLD: We are in receipt of a copy of your journal, which, we find, contains a great deal of interesting reading matter.

Up to the present time it seems, the Scandinavian countries have not had much of any attention on the part of the United States rubber manufacturers, the importers here principally getting their supplies from the English, Scotch, German, and lately Russian manufacturers.

Since bicycling became so popular, and as this year American bicycles have taken the lead entirely, it is a consequence, that American tire-manufacturers are commencing to get their share of this trade, and, as the wheels are always bought complete with tires, the American manufacturers of these goods get a nice amount of business in this way alone. Besides there is of course a steady demand for extra tires and also for repair outfits, etc.

As far as we have heard everybody is well pleased with the American tires. The make that is best known here is Morgan & Wright's "quick repair," and we dare say that three-quarters of the American tires used are made by this firm. Besides Morgan & Wright we will mention the Gormully & Jeffery, Hartford, and Akron as being the tires best known.

While, as stated above, we have not heard any complaints of the American tires, we believe it is the general opinion that it would be well if they were made a little heavier than they are; at least we have heard several dealers as well as riders express themselves to this effect. The roads here are not rough, but, as they are filled in with stone, the tires are often put to a hard test.

Future prospects for American bicycles and tires in the Scandinavian countries, we think, are very bright.

An article that ought to be imported to a larger extent from the United States is rubber hose for different purposes, such as fire and garden use, etc. England and Germany are now having this trade almost to themselves.

Attempts have been made at introducing American rubbers, but without success as yet. This has its reason in the American rubbers being made too narrow and too high in the heels. We do not doubt but what an interesting trade would develop in this line if the goods were made up to suit the trade here, and we believe it would pay a good factory to go in for this trade. The larger part of the rubbers are now imported from Russia and Scotland. In Sweden there is a rubber factory, but it is only operated on a small scale. Lined rubbers or overshoes are little known. On account of the cold weather, which we often have, they ought to be more used.

Rubber coats and mackintoshes are imported from England and Germany. For the former the demand is not very large, as coats for heavy use are made up here from oiled goods, but the import of mackintoshes is steadily increasing. It is principally the cheaper grades of these that are bought in Germany; the better qualities are taken from England. American manufacturers ought to compete favorably for this trade.

As a whole the purchasing power of the Scandinavian coun-

tries is growing year by year. Exports as well as imports are steadily increasing.

If any of your readers should want special information with regard to the possibility of introducing their goods, we shall endeavor to answer their inquiries to our best ability.

C. E. SONTUM & CO.

Christiania, Norway, August 4, 1896.

#### WOONSOCKET'S MAYOR TAKES A HAND.

THE closing of the great rubber-shoe factories for a longer time than usual this year was a serious thing for the thousands of operatives who were left idle. It happens, in the case of most of these factories, that each is the principal dependance of the village in which it is located, for the employment of the laboring population and the principal source of the money without which merchants, tradespeople, and landlords could not long continue in business. The people of Woonsocket, R. I., this year were particularly disheartened by the fact that the two great factories of the Woonsocket Rubber Co., which in good times disburse about \$25,000 a week in wages, were closed much longer than usual, and that without any assurance that work would be resumed at any particular time. Meanwhile people who were by no means indolent were falling in arrears to their landlords and tradesmen, and the city poor-relief fund was threatened with exhaustion. The rubber-workers were little short of violence when a force of Italians from outside the city were employed on the public works.

It was at this stage that the mayor of Woonsocket, George W. Greene, undertook, in the interest of the public, to bring about an improvement in affairs. On August 19, in his official capacity, he addressed a letter to Colonel Colt, president of the Woonsocket Rubber Co., stating that, should the rubber mills longer remain idle, he should deem it his duty to recommend that the city council attempt to rescind its former action in exempting the company from taxation to a large extent. This was followed by a conference between the gentlemen named—after Colonel Colt had consulted President Evans, of the United States Rubber Co.—and the result was a promise to the mayor that the factories would be in operation not later than September 15. They were started, as a matter of fact, on the 10th.

By the way, surprise was expressed in the trade that the notice posted by the Goodyear's India Rubber Glove Manufacturing Co. (Naugatuck, Conn.) of an intended resumption of work on September 1 should have been countermanded by the United States Rubber Co., the factory remaining closed thereafter until the 14th of the month. It has been suggested that the resumption of work at Woonsocket sooner than was originally proposed had some connection with postponing the work at Naugatuck, the United States Rubber Co. being loth to pile up goods in a season which has made such a dull beginning.

The above-mentioned action of Mayor Greene was not his first in a similar case. The Woonsocket *Call* relates the following history: "During the conversation Mayor Greene called attention to the statement made last May to the effect that he (Mayor Greene) was not the cause of President Evans's order to start the rubber mills, but that President Joseph Banigan of the Woonsocket company had ordered the start on his own responsibility. Colonel Colt said the statement was untrue and that the start had been ordered because of Mayor Greene's letter to President Evans. Colonel Colt said he was present at the meeting of the executive committee of the United States Rubber Co., at which Mayor Greene's letter last May was discussed and heard the order given to Mr. Banigan to start the works, a step taken on account of the letter Mayor Greene had sent to President Evans at the time."

## INDIA-RUBBER IN BRITISH OFFICIAL REPORTS.

THE British foreign office has published a special "Report on the Productions, Commerce, and Finance of the States of Amazonas and Pará," in Brazil, in which is comprised the most comprehensive array of India-rubber statistics relating to the Amazon country that has ever been printed in a single publication. Since the figures for the most part, however, have appeared from time to time in THE INDIA RUBBER WORLD, there is no reason to repeat them at this time. Only a few details will be given here to show the sources of Pará rubber. First is a table showing the districts of origin and the qualities of the India-rubber produced in the state of Amazonas which entered the port of Manaus during the year 1893, the figures referring to kilograms:

DISTRICT.	Fine.	Medium.	Coarse.	Caucho.	Total.
Rio Purús.....	2,850,027	1,274	607,904	250	3,459,455
Rio Jurá.....	1,740,950	.....	318,219	28,648	2,087,817
Rio Madeira.....	1,277,710	.....	254,639	47,222	1,579,571
Rio Javary.....	557,033	267	168,441	307,108	1,032,849
Rio Solimões.....	608,569	.....	192,206	48,736	949,511
Rio Negro.....	161,070	.....	60,860	.....	221,930
Rio Jutaby.....	51,785	.....	4,308	.....	56,083
Rio Amazonas.....	3,386	.....	509	.....	3,895
Total.....	7,250,530	1,541	1,605,086	431,964	9,289,121

One other table which will be given relates to the origin of the India-rubber received at Pará from neighboring republics, as follows, the figures again referring to kilograms:

	1890.	1891.	1892.
Peru.....	1,163,909	701,585	783,231
Bolivia.....	432,548	502,481	653,091
Venezuela.....	7,976	3,775	.....
Total.....	1,604,433	1,207,841	1,436,322

THE British consul at Maranhão, Brazil, notes that the high price obtained for India-rubber in the state of Pará attracts laborers from Maranhão to the extent of interfering with most industries in the latter state. The following rubber statistics for the port of Maranhão are given:

	Tons.	Value.
In 1893-94.....	37	£3266 18 11
In 1894-95.....	36½	3479 1 9

THE British consul at Caracas reports the shipment of India-rubber from Venezuela during the fiscal year 1893-94, amounting to 80,245 pounds, which evidently does not include such rubber as may have found its way, via the river Negro, to Brazil.

BY far the most important port of Colombia is Barranquilla, whence there was imported during 1895, according to the British consul, India-rubber to the value of £57,884 (= \$289,420). In another report, covering the year 1893, during which the movement of India-rubber from this port was smaller, its distribution is shown to be as follows:

Packages.	Packages.
To London.....1069	To New York.....22
To Liverpool.....21	.....
To Havre.....155	Total.....1276
To Hamburg.....9	.....

THE exports of India-rubber from Guayaquil for two years past—comprising about one-half the production of Ecuador—are reported by the British consul at 463,444 pounds for 1894 and 443,060 pounds for 1895 (counting 101.41 pounds to the

quintal). The reported value was £27,420 for the former and £30,583 for the latter year, although the quantity has shown a decrease.

\* \* \*

HER Majesty's secretary of legation at Mexico has prepared a "Report on the Cultivation of Cacao, Vanilla, India-Rubber, Indigo, and Bananas in Mexico," based upon data furnished by the Mexican Information Bureau, some part of which has appeared already in THE INDIA RUBBER WORLD. The report indicates the limits within which the *Castilleja elastica* flourishes—and these are rather larger than is generally supposed—after which follow details of the labor required to establish a rubber plantation of 100,000, the cost of which is estimated at \$25,000 in Mexican silver. A steady income of \$100,000 per year, for twenty-five or thirty years after the rubber-producing period begins, is predicted, though no experiments have yet been carried so far. The principal rubber plantation in the republic is the "La Esmeralda," in Juquila, Oaxaca, which has over 200,000 trees nine years old. The next is a plantation in the hacienda "Doña Felipa Ortiz," in Pichucalco, Chiapas, consisting of 10,000 trees seven years old.

\* \* \*

THE British consul at Vera Cruz shows the following details of exports from that port, for fiscal years ending June 30:

	1893-94.		1894-95.	
	Tons.	Value.	Tons.	Value.
India-rubber.....	26	£ 2,513	31	£ 3,570
Chicle.....	187	12,103	117	11,122

The destination of all these products in the second year mentioned was the United States, with the exception of 1 ton of Chicle, which went to the West Indies. The vice-consul at Progreso reports a larger output of Chicle from the state of Yucatan in 1895 than in any former year.

\* \* \*

THE annual report for the Gold Coast Colony for 1894 shows that only 3,027,527 pounds of India-rubber were exported in that year as against 3,395,950 pounds in 1893. The report continues: "Notwithstanding this falling-off, more rubber was collected in 1894 than in any previous year, excepting 1890 and 1893, and the decline may be traceable to the disturbance of trade in Ashanti (where large quantities of rubber are collected), arising from the petty war between King Prempeh of Kumasi and the Nkoranzas, and from the state of unrest which prevails in Ashanti, which deters many native rubber collectors from proceeding to that country." Since the date of this report King Prempeh has been placed under subjection by British arms, and his influence upon the collection, Accra rubber need not again be feared. Indeed, as already noted in THE INDIA RUBBER WORLD, the output for 1895 exceeded 4,000,000 pounds.

\* \* \*

THE output of India-rubber from the Niger Coast Protectorate—from the old Calabar district, on the west coast of Africa—is thus shown in an official return, the fiscal year ending on March 31:

YEAR.	Pounds.	£.	s.	d.
In 1891-92.....	373,839	15,536	14	8
In 1892-93.....	331,433	17,609	18	11
In 1893-94.....	540,772	27,781	13	10

\* \* \*

BRITISH CENTRAL AFRICA, the administration of which is located at Zomba, is to have a botanical garden, in charge of



Alexander Whyte, "head of the scientific department" of the colonial government. Mr. Whyte has prepared a "Report on the Botanical Aspect of British Central Africa," which fills a pamphlet of 19 pages, issued by the British foreign office. Four of these pages are devoted to India-rubber, but the information given is general in character and embraces practically nothing that is new regarding the African rubber-bearing species. It appears, however, that various kinds of *Landolphia* creepers already flourish in the country referred to, and that Mr. Whyte means to give some attention to the preservation of the vine by the introduction of proper methods of rubber-gathering. Cultivated Ceará-rubber and *Ficus elastica* plants in the colony have already reached the stage of yielding rubber.

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THE British consul at Mozambique, in Portuguese East Africa, reporting upon the trade of that district, gives the following details respecting the exports of India-rubber, in pounds:

	1890.	1891.	1892.
To Great Britain.....	58,240	51,520	51,520
To Germany.....	44,800	78,400	120,960
To France.....	26,880	..	..
To Holland.....	8,960	62,720	47,040
Total.....	138,880	192,640	219,520

\* \* \*

THE British consul at Beira, in Portuguese East Africa, reports the following details of the export of India-rubber from that district, the greater part of which is controlled by the Mozambique Company:

	1894.	1895.
To Germany..... pounds	10,640	25,648
To England.....	30,920	1,456
To Zanzibar.....	..	1,120
Total.....	41,560	28,224
Values.....	£3,100	£1,960

The freight on rubber from Beira to Europe is equivalent, in our money, to \$17.50 per ton of 1000 kilograms.

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THE British consul at Batavia gives the following facts with respect to the exportation of India-rubber and Gutta-percha from the islands of Java and Madura:

	1893.	1894.	1895.
India-rubber..... pounds	69,496	99,280	90,848
Gutta-percha.....	39,576	36,720	39,848

\* \* \*

THE annual colonial report for the Straits Settlements for the trade of 1894—the latest received to date—mentions important increases in the export of Gutta-percha and India-rubber, but without giving details.

\* \* \*

ACCORDING to the annual administration reports of Burma the exports of India-rubber therefrom amounted to the following weights (in pounds), in the past two fiscal years, which end on March 31:

To—	1893-94.	1894-95.
United Kingdom.....	749,168	686,224
Straits Settlements.....	24,976	74,144
United States.....	..	10,864
Other Countries.....	..	25,088
	774,144	796,320

If there be added to these figures for 1894-95 the exports from Assam, amounting to 188,800 pounds, the total from British India for that year is shown to be 985,120 pounds. While the total exports from Burma showed an increase over

the former year, there was a smaller output, in quantity and value, from upper Burma.

The export of rubber from Assam, according to the latest administration report for that district, was less than in the preceding year on account of a smaller amount having been received from the hill tribes beyond the northern border of the country. The Abor and Mishmi tribes were not permitted to trade in Assam last year on account of their lawless conduct in the preceding year. No extensions to the Kulsi and Charduar plantations were made during the year; the expenditure incurred in their maintenance was 278 and 4068 rupees, respectively.

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IN this connection may be presented statistics of the rubber output of British India compiled from statements published in a different form, showing the details for five years past, and up to a later date. They are as follows, the figures referring to pounds:

YEAR.	Assam.	Burma.	Total.
In 1891-92 .....	399,056	646,352	1,045,408
In 1892-93 .....	..	..	1,116,864
In 1893-94 .....	302,848	774,144	1,076,992
In 1894-95 .....	241,920	796,320	1,038,240
In 1895-96 .....	..	..	801,248

When it is remembered that prior to 1870 all the rubber exported from British India came from Assam, and amounted to upwards of 1,000,000 a year, there is reason for the prediction that the production in Assam may cease altogether. But it happens that the Burmese rubber is of precisely the same quality.

#### FIRST QUALITY GOODS FROM SETAUKET.

THE Liberty Rubber Shoe Co. (Setauket, L. I.) have decided, so it states, to make all grades of rubber footwear. In the past, this company has produced third grade rubbers entirely. It now, however, is preparing to make a first grade, to be called the "Liberty," a second grade to be known as the "Giant" and a third grade which is to be branded "Monarch." There is no question but what it is a most commendable thing for any concern to make the highest grades of goods in their line. Rubber manufacturers of experience, however, assert that it very rarely happens that those who are expert in making the lower grades of goods are able to turn out the higher grades. Fine rubber goods in any line are not easy to make, and it will be a matter of interest to the trade to examine the "firsts" as they come from the Setauket factory.

#### ANOTHER SETAUKET RUBBER CONCERN.

INQUIRIES have been received at the office of THE INDIA RUBBER WORLD respecting the Pará Rubber Manufacturing Co., of East Setauket, L. I., who have been writing to members of the trade in New York with regard to the purchase of supplies. In answer to a question, Joseph W. Elberston, the Setauket rubber-manufacturer, said: "That is the name of a little concern that has gone into tire-making on a small scale at a place near Setauket. They are not incorporated, but are doing business as a copartnership. A man named Reece is at the head of the business, and they will make self-healing tires."

THE China and Japan Trading Co. (No. 34 Burling slip, New York) inform THE INDIA RUBBER WORLD that they receive orders from time to time from Japan for rubber boots and shoes of the styles worn in this country.

## THE RUBBER TIRE ASSOCIATION.

**W**HAT will probably prove to be the event of the year in the India-rubber business in America was the organization, in New York, on September 17, of The Rubber Tire Association, embracing most of the important manufacturers of tires in this country. It was the outgrowth of a movement started at the meeting of tire manufacturers called together by Col. Theodore A. Dodge on May 28, and reported in THE INDIA RUBBER WORLD of June 10. Two committees were appointed at that meeting—one to draw up a form of constitution and by-laws, the other to submit a form of guarantee on tires that should do away with existing evils under that head.

The trouble with guarantees, as everybody knows, has been the bane of the tire industry, but for several years it seemed impossible to bring the manufacturers together on a common ground, even for the discussion of the evil. Colonel Dodge's interest in the matter seems to have been a fortunate incident, since he occupies a more independent position in the trade—or at least he has been less actively engaged in competition—than any other member of the trade of equal prominence. Then his ownership of the Tillinghast tire patents, under which 21 manufacturing firms have been licensed, placed Colonel Dodge in such a relation to the trade as to make the nucleus of a general organization a simple matter. The officers elected were:

THEODORE A. DODGE, president.

L. K. McClymonds, first vice-president.

G. T. PERKINS, second vice-president.

KIRK BROWN, secretary.

GEORGE F. HODGMAN, treasurer.

*Executive Committee:*—George H. Day, J. Edwin Davis, H. C. Corson, John F. Palmer, and Henry C. Morse.

A standard form of guarantee, to be known as the "association guarantee," was adopted, in the following form:

## 1897 GUARANTEE.

We agree to repair free of charge any tires that can be repaired, no matter how the injury may have been caused, provided such tires are delivered to us express prepaid.

We further agree to replace free of charge any tire which on examination we find defective in material or workmanship, provided such tire is delivered to us express prepaid.

This agreement applies to all tires sold by us after September 1, 1896, and expires February 1, 1898.

This agreement does not apply to tires into which any so-called anti-leak preparation has been introduced.

The new guarantee is exceedingly liberal, and yet will have the effect of deterring manufacturers from the use of poor materials or imperfect workmanship. No one could afford to offer this guarantee on any but a good tire. The new guarantee expires, as will be seen above, on the first day of February on all tires sold during the preceding year. Tire-men have had a great deal of trouble resulting from the use of so-called anti-leak compounds, and under the terms of the new guarantee it will be forfeited by the treatment of a tire with any of these preparations.

The question of credits was discussed at great length, but no definite action on the subject was taken, it being the opinion of those present that the Cycle Board of Trade had covered the field very fully in the past, and that it might confidently be expected to continue to do so.

The list which follows gives the names of the companies represented in The Rubber Tire Association, together with the names of the officials of those companies who were present at one or both of the two meetings above referred to:

[The asterisk (\*) indicates licenses under the Tillinghast patents.]

- \* The Boston Woven Hose and Rubber Co.=Col. Theodore A. Dodge, J. Edwin Davis.
- \* The B. F. Goodrich Co.=Col. G. T. Perkins, S. Y. l'Hommedieu, H. C. Corson.
- \* Newton Rubber Works.=A. H. Alden, William J. Kelley.
- The Gormully & Jeffery Manufacturing Co.=R. Philip Gormully.
- \* Hodgman Rubber Co.=George F. Hodgman.
- \* Hartford Rubber Works Co.=George H. Day, Lewis D. Parker.
- \* New York Tire Co.=Henry C. Morse, Frank N. White.
- Mechanical-Fabric Co.=A. N. Kelley.
- The American Dunlop Tire Co.=Kirk Brown.
- \* New York Belting and Packing Co., Limited=L. K. McClymonds, L. A. Leland.
- \* Kokomo Rubber Co.=D. C. Spraker.
- \* Ideal Rubber Co.=A. C. Eggers.
- \* The Spaulding & Pepper Co.=J. W. Spaulding, Charles L. Pepper.
- \* Peoria Rubber and Manufacturing Co.=Monroe Seiberling.
- \* The Palmer Pneumatic Tire Co.=John F. Palmer.
- \* L. C. Chase & Co.=B. F. Morrison, J. Hopewell.
- \* Diamond Rubber Co.=Roger B. McMullen.

The official membership list given out includes also the Columbia Rubber Works Co., closely allied to the B. F. Goodrich Co., and of which Mr. l'Hommedieu is the manager, and the American Wringer Co., who were not represented at the meetings.

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THERE has been a steady growth in the number of licenses under the patents controlled by Colonel Dodge, evidently for the reason that the different manufacturers, upon investigation, reached the conclusion that the patents cover a great deal more than they were prepared at first to concede. After several large manufacturers had become licensees, there remained some who considered it safer, and possibly cheaper, to pay royalties than to pay the costs of litigation, and these have been added since to the list, although not fully convinced as to the merits of the different patent claims.

## THE GREAT WOONSOCKET PLANT.

**I**T seems almost incredible that the magnificent plant of the Woonsocket Rubber Co. is the growth of less than thirty years. When Mr. Banigan started as a manufacturer of rubber boots and shoes, his plant was a very insignificant affair. He had a little engine of 15 horse-power, which was so over-strained that when the grinders and the calenders were working at the same time, the men often had to help to push the big fly-wheel past the centering point. It was not long, however, before this engine gave way to one of 30 horse-power, which in turn made way for one of 80 horse-power, which was shortly replaced by one of nearly 400 horse-power. That little beginning of early days has grown into three huge factories, which now constitute the Woonsocket plant, which have a daily capacity of 10,000 pairs of boots, and 30,000 pairs of shoes. This enormous growth demonstrates very forcibly one thing—that the Woonsocket boots and shoes must have been good.

## NEWS OF THE RUBBER-SHOE FACTORIES.

WORK has been pushed rapidly of late upon the new Banigan rubber factory at Olneyville, near Providence, R. I., which is to occupy the old Saxon woolen-mill property on Valley street. Although no pretense of secrecy is longer maintained, all the work is in the name of William Gilbane & Bro., a building firm who are under contract to have the woolen mill converted into a rubber-shoe factory by November 1. The principal building is four stories high, 420x75 feet in size, with walls three feet thick and strong floors. At the center of the side of the main mill that faces in the mill yard a large tower, which will be four stories high and will have a bell tower at the top, is being built. There is also a brick boiler house, a large two and-one-half-story stone store house, a two story office building and a barn on the property that the new concern owns. Some additional buildings will be needed. On September 24 the Messrs. Gilbane filed an intention at the Providence city hall to erect a two-story brick building, 50x164 feet, to be used for manufacturing purposes, at No. 335 Valley street, which is a part of the Banigan property. There have been several permits to build or to make changes at these mills lately, and all in the name of Gilbane.

The first rubber machinery to arrive was the grinding apparatus, manufactured at the Birmingham Iron Foundry (Birmingham, Conn.) Other machinery is in readiness, and, as it arrives from the different foundries, will be set up under the direction of T. B. Buddington, who installed the machinery at the "Alice" mill. It is understood that Maurice C. Clark, formerly employed at the Millville (Mass.) mill of the Woonsocket Rubber Co., will be superintendent of the factory. He has been a successful inventor of machinery, and is regarded as one of the best posted rubber-men of the day. It is said that all the machinery and supplies for the new mill are consigned to John J. Banigan. Up to date the name of Joseph Banigan does not appear to have been connected with the new enterprise except in the columns of the newspapers.

General-Manager Emmett A. Saunders is reported as saying that no agreement existed between the United States Rubber Co. and Joseph Banigan, their former president, which would prevent the latter from engaging again in the manufacture of rubber shoes. The Providence correspondent of the Boston *Herald* says of the new Banigan enterprise: "The competition will be no more particularly directed against the United States Rubber Co. than will be the operation of the rubber works which George H. Hood of Boston is building for his sons at Watertown, or those of Mr. Watkinson at Philadelphia, which he secured after he left the trust."

The Saxon mills were formerly an extensive yarn and cotton plant, comprised in the great woolen syndicate organized at Providence in 1892, through the instrumentality of Charles Fletcher, who has since been its president, under a five years' contract. The plant was bonded to English capitalists at the time named for upwards of \$3,000,000, Mr. Fletcher retaining a controlling interest. Notwithstanding the disastrous condition of the woolen industry generally, he has made the plant earn the interest on the bonds and the preferred stock. The price reported in June to have been paid for the Saxon mills by the Banigans was \$125,000. Though a great deal of the woolen machinery has since been removed, some of the lofts were filled with dismantled looms at the latest accounts,

Olneyville people welcome the advent of a rubber factory in

their town. The disadvantage of a community depending upon one line of manufactures, producing general idleness in the place when that particular industry is in a dull state, has been more than once impressed upon the people there. It is supposed that one reason for the choice of Olneyville for the site of the new factory is the fact that labor is so abundant there. By the way, it is asserted that Olneyville might have had big rubber mills many years ago, if the owners of land desired as a site for the big enterprise which was finally located at Bristol, had been disposed to name reasonable figures for their holdings. That land has been idle all the years which have passed.

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## THE NEW HOOD FACTORY.

THE Hood Rubber Co. have issued their first catalogue of boots and shoes to be manufactured in their new \$225,000 factory at Watertown, Mass. Fred C. Hood, formerly treasurer of the Boston Rubber Co., fills a similar position in the new company, and has been its most active member in getting the work under way at Watertown. The position of secretary is filled by his brother, A. N. Hood. Their offices are at No. 114-116 Bedford street, Boston. The company's first-quality product will be stamped "Hood Rubbers" and their second quality "Old Colony." Their selling-agent will be E. I. Aldrich, who was formerly connected with the Boston Rubber Co. in the same capacity.

At the factory the main building is four stories high, and of peculiar shape, being 80x112x128x48 feet in size. It is so constructed at the ends as to permit additions to be made with slight trouble. There is an adjoining building, three stories high, about 80x60 feet, and a boiler-house. All of the buildings are of brick, well lighted, strong, and durable. One of the novel ideas connected with the erection of the buildings is that no stone foundation was used, the bricks being laid in cement on the gravel, at a depth of about 4½ feet from the surface. At the base the bricks are spread thirty inches to the level of the piers. The plant is located about six miles from Boston and about three miles from Cambridge. The town paid no bonus to the concern, nor was any inducement held out to them by the town. But the local newspapers give the credit for securing an important industry for Watertown to Chester Sprague, an influential citizen, in whose name the factory site was purchased.

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## THE UNITED STATES RUBBER CO.

AT the factory of *The L. Candee & Co.* (New Haven, Conn.) the engines were started, after the summer shut-down, on Tuesday, September 8. On Thursday the boot-and shoe-makers began to fit up, and to make up on Friday. The packing-room force came in on Saturday, increasing the number of employes to about 1300. The shut-down in this factory began on Saturday, August 1, at which time the resumption of work was expected at the end of three weeks. At the end of this time, however, a notice was posted at the works extending the shut-down indefinitely. Upon the re-opening of the mills, officials of the company stated that they would be operated as long as the business situation would permit.

The *National India Rubber Co.* (Bristol, R. I.) are making about 20,000 pairs of shoes and arctics daily, and for some weeks past good shipments have been made to the



west and southwest. The druggists' sundries and mechanical departments have also been busy during the month, and the statement has been given out that there were heavier orders in hand for some grades of goods than ever before, leading to an increase in the number of hands employed.

The Millville and "Alice" mills of the *Woonsocket Rubber Co.* were started on Friday, September 11, after a shutdown lasting from July 18 in the case of the former and from July 25 in the latter. The calender-rooms were started on the date mentioned, the cutters began work on the 12th, the making-up began on the 14th, and all departments were in operation by the 15th, with 1000 or more hands employed in each of the two mills. General Manager Saunders, of the United States Rubber Co., is quoted as saying that it cost \$1000 a week to keep the "Alice" mill idle, and that it is the best mill included in the combination.

The *Goodyear's India Rubber Glove Manufacturing Co.* re-

sumed work at Naugatuck on Monday, September 14, instead of starting on the first of the month, as was first announced. Employment is given to about 1000 hands, and a busy season is anticipated.

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#### BOSTON RUBBER SHOE CO.

THE two factories of the Boston Rubber Shoe Co., at Edgeworth and the Fells, resumed work on Monday, August 24, after a shutdown of two weeks, lasting from Saturday, August 8, with a full force of employes. On September 11 thirty five hands employed on children's shoes received notices of discharge, on account of the slack demand for goods of that class. About the same time the hours of labor at both factories were reduced to three-quarters time, from 7.30 A. M. to 4 P. M. About 3200 persons are employed at these factories, and the Malden newspapers say that business in the town promises to be remarkably good this fall.

#### AFFAIRS OF THE HODGMAN RUBBER CO.

THE Hodgman Rubber Co. went into the hands of a receiver on September 21, to the great surprise of the business community and the regret of a wide circle of friends, in the rubber trade and out of it. Frederick A. Ward, of counsel for the corporation, went in the morning to White Plains, Westchester county, N. Y.—in which county their factories and corporation headquarters are located—and through counsel asked Supreme Court Justice Dykman to appoint a receiver. He appointed Robert W. Todd, a lawyer with offices at No. 229 Broadway, New York, whereupon the factories at Tuckahoe and Mt. Vernon were shut down. At 3 o'clock notices were posted at the company's two New York stores, stating that they were "Closed temporarily to take account of stock." Mr. Todd furnished a bond for \$20,000, and within a day or two the stores were reopened for the sale of goods, while orders were given to finish up whatever profitable work there was at the factories by using the materials on hand. The company had a large amount of material in stock, and were well supplied with orders.

In the United States circuit court in Boston, on September 21, Judge Colt appointed Henry C. Noyes, manager of the branch of the Hodgman Rubber Co. at No. 135 Essex street, in that city, temporary receiver of the company. The appointment was asked by a bill in equity which Mr. Noyes brought against the company, as one of its creditors, on the ground that promissory notes which the company had previously given, amounting to \$17,000, matured on that date and the company were not entirely able to meet them.

The company's Chicago branch, opened in the new Atwood building in March last, was also closed, and the stock of tires carried there has since been shipped to New York.

At a meeting of the creditors called by Receiver Todd and held at the Astor House, New York, on the afternoon of October 6, there was an attendance of about sixty. James B. Ford was made chairman and Henry C. Pearson secretary. The receiver made a detailed report of the condition of the company's affairs, showing nominal assets of \$502,436.39, on which he thought a fair valuation, under the circumstances, would be \$255,015.72. The liabilities amounted to \$331,767.26 in book accounts and discounts at the banks and \$22,000 in mortgages on factory property, in addition to which there were contingent liabilities estimated at about \$50,000. A resolution was adopted expressing confidence in the receiver and requesting him to continue filling the orders in hand.

The Messrs. Hodgman, through Charles Blandley, of their counsel, presented a report on the condition of their business since January 1, 1896, showing losses estimated at \$102,400. Of this \$43,000 is charged to the bicycle-tire department, in which preparations were made for doing business on a large scale, but too recently for commensurate returns to have been possible. Many goods had also been made without a profit to the factories, in order that there should be no suspension of work, or in order to meet competition in the trade. In response to an inquiry as to whether they had any proposition to offer, the Messrs. Hodgman said that they were willing to give unsecured notes at three, six, and twelve months, for 20, 15, and 15 per cent., respectively, or an aggregate of 50 per cent.

The sentiment of those present was expressed by the adoption of the following motion, it being understood that the vote taken did not bind the creditors individually, though doubtless all of them will sign an acceptance of the offer:

*Moved*, That it is the sense of this meeting that, with the showing made by the receiver and the statement made by Mr. Blandley, the counsel for the Hodgmans, the creditors accept 50 per cent. of their respective indebtedness, payable 20 per cent. in three months, 15 per cent. in six months, and 15 per cent. in twelve months; those dates to commence from the date of the receiver's discharge and the turning over of the Hodgman's assets.

The wish was cordially expressed that the company might be able to resume business and speedily recover their former position in the trade.

The cause given for the company's suspension is the prevalent business depression and financial stringency. It is possible, however, that the company did not realize as fully as it expected on bicycle-tires, into the manufacture of which they entered extensively last spring. As usual at this time of the year, the company were doing a large business, making up goods for the winter trade, requiring the use of large amounts of borrowed money. Their business had been in large volume, but they were unable to meet some of their paper which matured recently, and, to avoid any possibility of suits and preferences, they concluded to ask for a receiver.

The business of the company was conducted at a profit during 1895, and their books at the beginning of the present year made a good showing of assets in excess of liabilities. The company always had a very high reputation, and met their obligations promptly. The following paragraph from the *New York Tribune* indicates the esteem in which the house is held:

"One of the largest creditors of the company was in the Hodgman Broadway store only a few minutes before the doors were closed. He said that, had he known the facts as to the firm's position, he would have been glad to have allowed his debt to wait as long as necessary, and would have advanced to the company all the money it needed to pull through the present trouble."

The founder of the business now known by the name of the Hodgman Rubber Co. was Daniel Hodgman, who opened a store at No. 27 Maiden lane in the year 1838. Shortly after he established a factory near Twenty-first street and the East river, which was burned in 1853, after which the works were moved to Tuckahoe, on the line of the Harlem railroad, into what was formerly a cotton-mill, where they have since remained and grown. Only last year extensive additions were made to this plant. In 1882 a branch factory was established at Mount Vernon, which since 1886 has been devoted exclusively to the manufacture of the Hodgman mackintoshes.

Daniel Hodgman's advertisements in the New York newspapers in the earlier years of his connection with rubber are interesting as indicating the character of the trade prior to the discovery of vulcanization. Here is a specimen, copied from a New York newspaper printed in October, 1846—fifty years ago:

**D.** HODGMAN, Manufacturer and Dealer in India Rubber goods, Warehouse, 27 Maiden lane, New York.—India Rubber Carriage Cloth, Air Beds, Pillows, Cushions, Life Preservers, Life Belts and Life Jackets; every variety of India Rubber Shoes, for Ladies and gentlemen Door Springs, Shirred Suspenders, Macintosh Coats, Cloaks and Capes, India Rubber Caps, Pantaloon, Long and Short Boots, Wading Pantaloon, Water Bottles, Travelling Bags, Horse Covers, Plaster Cloth, Cloth for garments, together with almost every description of India Rubber goods. For sale wholesale and retail. 028

Mr. Hodgman became one of the licensees under Charles Goodyear's patents, and in the allotment rubber door-springs were assigned to him. These were, at the time, an important line of goods, and some are manufactured to this day. But the Hodgman line of vulcanized products speedily extended, until in the end it embraced as wide a variety of goods as can be shown by any other rubber factory in the country. Mr. Hodgman died in 1874, and his widow retained her interest in the concern until her death in 1885. In that year his sons incorporated the business under the laws of New York state, with a capital of \$250,000, which was increased five years later to \$350,000.

The sons of the founder, George F. Hodgman and Charles A. Hodgman, are respectively the president and vice-president of the company, the latter having entire charge of the manufacturing department. The secretary of the company is George B. Hodgman, a grandson of the founder. The other directors are Joseph S. Stout and H. L. Camp.

The stores in New York are on the corner of Broadway and Grand street, where the main offices are situated and the wholesale business is done, and at No. 21 West Twenty-third street, which is exclusively retail.

### THREE NEW COMPANIES WITH ONE HEAD.

**T**HE Sussex Rubber Co. have been incorporated under the laws of New York state, "to manufacture rubber boots and shoes and other goods in Poughkeepsie," with \$10,000 capital, and the following directors: Albert H. Gleason, Charles H. Broas, and Martin Saxe, all of New York city.

Another new corporation is the Sussex Tire Co., with \$5000 capital, and a directorate composed of Messrs. Gleason and Broas, named above, and Charles A. Stuart. Still another is

the Sussex Cycle Co., organized by the same interests, all to be located at Poughkeepsie.

Albert H. Gleason, who is president of the three new corporations, is a lawyer with an office at No. 265 Broadway, New York, and the other incorporators are connected with the same office. When interviewed for THE INDIA RUBBER WORLD, Mr. Gleason said that the companies were as yet in a formative state, and without any need at present for more than nominal capital. They proposed in time to make rubber footwear, and a new rubber tire, which might be described as belonging to the same class as the "Vim" tire. They would also be in the field for the manufacture of bicycles. Mr. Gleason said that the important shoe-jobbing firm of Wallace, Elliott & Co. (New York) were already arranging to put the "Sussex" rubbers upon the market, and referred the reporter to that firm for further information. At the shoe house, however, details with regard to the business were refused, on the ground that they were not yet ready to advertise to the trade just what was being done. By the way, Wallace, Elliott & Co. have a shoe factory at Poughkeepsie, which may be the reason for the selection of that town as a site for the proposed new industries.

### THE NEW CONSOLIDATED RUBBER WORKS.

**T**HE Reading Rubber Tire Manufacturing Co. have, in addition to their plant at Reading, Mass., acquired the plant of the Chelsea Wire Fabric Rubber Co., Chelsea, Mass., and will operate the two mills under the name of The Consolidated Rubber Works. The company is organized under the laws of New Jersey, with \$500,000 capital, the plan being to manufacture pneumatic tires and a general line of mechanical rubber goods. The officers, as far as elections have now gone, are F. W. Hustis, general manager, F. H. Porter, treasurer, and R. A. Leigh, general superintendent. The plant at Chelsea will be devoted entirely to the manufacture of the alligator tread tire, of which 75,000 pairs have already been ordered. The Reading plant is now being equipped with machinery for the manufacture of a new type of thread tire which, the inventors claim, can be made more cheaply and far more quickly by their process than by any other way in the world.

### CHANGE IN AGENCY.

**T**HE New York Belting and Packing Co. Ltd., have transferred the agency for their mechanical rubber goods in New Orleans, from the Whitney & Sloo Co., Ltd., to the Charles Munson Belting Co. These gentlemen are the largest manufacturers of leather belting in the West, and are as favorably known for the quality of their goods as for the quantity. They will have the exclusive sale of the New York Belting and Packing Co.'s goods for New Orleans and adjacent territory, and in addition to their own line will carry a full stock of rubber belting, hose, packing, etc., so that they will be in position to fill orders with promptness and exactness. The new store is located at No. 313 St. Charles street. Both on their own behalf and on that of the Charles Munson Belting Co. the New York Belting and Packing Co. invite each of their old customers to call and inspect the premises.

MANY of the traveling rubber salesmen doubtless will be interested in the Commercial Traveler's Fair, to be held in Madison Square Garden, New York, on December 15-28, with the aim of raising \$150,000 to complete the national home for indigent commercial travelers and their dependent widows and children, at Binghamton, N. Y.

## HEARD AND SEEN IN THE TRADE.

NO single event in the rubber trade in New York since my acquaintance with it began has attracted more attention than the passing of the Hodgman Rubber Co. into the hands of a receiver. It has been commented on by everybody, but always in terms of regret, and of such consideration for the members of the firm that these gentlemen would, I am sure, if they could overhear all that has been said, feel much less keenly the blow which has fallen upon them. Of course, no one ever expected their suspension to be more than temporary, and the house has not a competitor who will not wish to see them again in the position in the trade which they have so long occupied.

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BY common consent this suspension seems to have been attributed, in some way, to the trade in bicycle-tires, which on the whole has proved the most unsatisfactory of all branches of the rubber industry. Whether or not this was the cause of the trouble I am not prepared to say, but from statements made to me by their receiver, Mr. Todd, regarding orders for tires received at home and from abroad since the date of his appointment, it is evident that the firm were on the eve of being rewarded for the energy shown in introducing their tires. It is not always that a good article, with the best of advertising, makes an immediate impression upon the market. Which reminds me of a recent remark by a member of a leading bicycle concern: "We began this business thirteen years ago and have been pushing it steadily ever since, but it has only been within the last two years that we have really 'caught on,' and now we are selling all the wheels we can make, and without cutting prices. A new firm cannot expect to do business on equal terms with us."

\* \* \*

APROPOS of foreign orders for tires, the Hartford people have gotten out a special export tire, which differs from their standard single-tube tire mainly in respect to weight, which is increased by one pound. This extra weight is not in fabric, they claim, but in rubber. Their manager in New York tells me that they have filled a good order lately for these tires for wheels to be shipped to South Africa. I don't know who is sending them, but a considerable number of American bicycles have gone out this summer to South Africa, which promises to become an important center of the bicycle trade. The largest single exporter of American bicycles, by the way, assures me that every wheel shipped by his house is provided with a good set of tires, since they would not be willing to leave one of their wheels to chance in the fitting of tires with which they are unacquainted. He says that all the American wheels going abroad of which he knows are equipped with tires, and the only pronounced demand for tires of the Dunlop type which he has met has been from Australia.

\* \* \*

I HAVE heard statements about the prices of tires lately, to print which would most likely injure the reputation of this paper for veracity. I should not expect most people to believe that tires had been offered at such low figures. But of course it was by manufacturers who were sorely pressed for money. "One man came to me," said a dealer, "and offered me some tires at a low figure, explaining that they were 'seconds.' I looked at his sample and found that it was a first-class tire, merely scratched with his thumb-nail to render it imperfect. He had a note about to mature in bank, and was forced to

have money—at any sacrifice in the way of prices—to keep from going under." By the way, I wonder how long all the licensees under the Tillinghast patents will be able to maintain their agreement about prices of tires. There's nothing in the agreement, I believe, about the stronger fellows helping the weaker ones at times when money is hard to get, but must be had, and it was under such circumstances that the old-time shoe-price agreements always were broken.

\* \* \*

THERE are really some people who need to have a joke labeled. Such are the members of the trade who have asked me why THE INDIA RUBBER WORLD has been "backing" the various ambitious schemes of General Joseph Marius Jean to revolutionize the rubber trade of the world with Balata from Cayenne. Such references to his enterprises—which have been mainly the writing of prospectuses—as have appeared in this paper have been meant to promote some gayety in the trade, and certainly not to encourage the investment of cash in shares. No doubt the General is a very estimable gentleman, who believes all that his prospectuses contain, and more, but what he needs is some one to teach him to believe less. As it happens that I was the indirect cause of his first becoming interested in Balata, I am really sorry that the net result of his efforts up to date—so far as the American market, at least, is concerned—has been the shipment of 600 pounds of gum, which found a purchaser at 40 cents a pound.

\* \* \*

It really is singular that, with the good qualities which Balata, for the past forty years, has been known to possess, its introduction into manufactures should have been so slow. Its consumption in this country has been a mere trifle, and the market in Europe is overstocked, although the world's production is probably less than 250 tons a year. Only the other day some offers of good Balata on the other side at 53 cents were declined, although this was several cents below the ordinary quotations.

\* \* \*

A LETTER from a New England center of the waterproof-clothing trade states that a combination in this line for the coming season is talked of, and that active steps have been taken toward giving it shape. Everybody in the trade seems agreed that present prices are beneath a paying point, but no single house, apparently, is strong enough to mark up its goods. By the way, it ought not to be such a hard matter for the rubber-clothing people to combine to regulate prices, since the trade is practically in the hands of a dozen concerns, which number is reduced by the fact that three of them are controlled by the United States Rubber Co., almost as one factory.

\* \* \*

As illustrating the low prices to which waterproof clothing has fallen, I am told that an important house in the rubber trade is no longer making up garments, for the reason that it can buy them for less money than the cost of material and labor at the rate which it has been paying. How such things are done remains a mystery to many people in the trade. A manufacturer tells me that garments offered to jobbers by a competitor a very few years ago at \$6 are being offered to-day at \$3.75, the materials being the same in all respects, and the workmanship apparently as good.

\* \* \*

THE long-established rubber house referred to as having



given up the manufacture of waterproof garments for the reason that they can be bought outside for less money has found another advantage in this course, viz.: they are now able to calculate to a cent what the goods cost them, which renders easier the work of fixing the selling price. While it may appear to the inexperienced a simple matter to figure out the cost of a manufactured article, nothing is, as a matter of fact, more difficult, especially if proper regard is given to the wear and tear of plant as an item of cost. Another point likely to be overlooked by the novice in manufacturing is the cost of putting products on the market—otherwise, selling-expenses. Such oversight leads often to the flooding of the market with goods by new concerns at prices which no conservative manufacturer can meet, resulting in such conditions as have led to many recent failures in the bicycle trade. As such things begin to be better appreciated by manufacturers, the field develops for the employment of expert accountants.

\* \* \*

THERE are rumors now and then of the return of Charles R. Flint to the rubber-importing trade, and of changes in some existing contracts for the supply of rubber to American manufacturers, but no dates are ever given for the new developments. But something newer is the suggestion that Joseph Banigan may be in the market soon as an importer of crude rubber on a larger scale than is needed for the new factory at Olneyville.

\* \* \*

THERE is a new department store on Sixth avenue, New York, managed by western men and based on western capital, opened during the past month on a larger scale than has been seen in any American city hitherto. It may be of interest to note that, while their stock embraces a wide variety of India-rubber goods, there is no distinctively rubber department. Thus women's mackintoshes are to be found in the department for women's wraps, and men's mackintoshes on another floor, in the men's clothing department. Rubber footwear belongs to the shoe department, rubber toys in the toy department, rubber sundries among the drugs, etc. As for mackintoshes, their stock seemed to be wholly of foreign origin—either imported, or made up in America by local branch-houses of English concerns, only the cloth being imported. The rubber toys are imported. There is one advantage, by the way, claimed for imported rubber dolls, animals, etc., in that the coloring is better done than on American goods, rendering it less liable to come off with use.

THE MAN ABOUT TOWN.

## MR. WALTER S. BALLOU.

IT is probable that no other agent in the rubber trade is better known than Mr. Walter S. Ballou, who has recently resigned his position as one of the selling agents of the United States Rubber Co. Mr. Ballou for twenty years past has been the selling agent of the Woonsocket Rubber Co., and in that

capacity not only made a host of friends among the large buyers throughout the country, but was wonderfully successful in marketing the Woonsocket goods. For many years he has been Mr. Joseph Banigan's right-hand man, and not only did he contribute to the success of the Woonsocket and Millville factories, but through his foresight and business sagacity he has accumulated a very comfortable fortune for himself.

At the present time Mr. Ballou's only active interest is that of secretary of the American Wringer Co., of which Mr. Joseph Banigan was the organizer, and in which he is still a very large stockholder. Exactly what his plans for the future will be has not yet transpired. Of course, with the Banigan Sons as manufacturers of rubber shoes, gossip has it that Mr. Ballou will be asked to assist in their sale. That, however, is at the present time denied, as it is said that he has a decided leaning toward an enterprise in no way connected with the rubber trade.

Mr. Ballou as is well known is an enthusiastic sportsman, and is a most skillful wielder of both gun and rod. It is probable that no one man in the rubber trade has been more successful

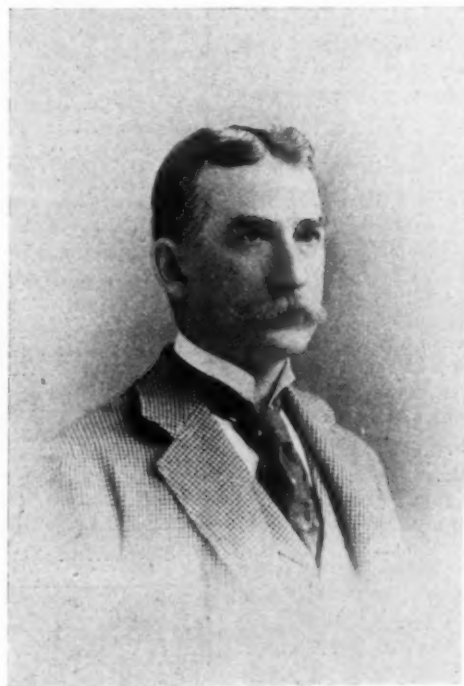
in capturing bass, trout, and salmon, than he. He is a member of all of the best clubs in Providence, R. I., of the Lotus in New York, as well as an active member of the Adirondack Fish and Game League.

The marketing of the Woonsocket goods will be hereafter done by Mr. Chester J. Pike, the Boston selling agent of the United States Rubber Co., who is a close friend of the retiring agent, and in every way equipped to add this line to the important ones that he now so successfully markets.

## MAKING RUBBER STRIPS IN LIVERPOOL.

THE Liverpool rubber-importing house of Kramrisch & Co., in a recent circular, say: "Another kind of which large quantities have been sold is Cape Coast strips, home-made. Quite a new industry has sprung up for the manufacture of these strips, many of the importers having put up machinery for the cutting up of the Cape Coast lumps and pressing the same into strips when received from the coast. Of course

these home-made strips cannot be as dry as those made on the coast and imported from there." For a dozen years past the industry of cutting into strips the crude rubber brought by the blocks from the interior, for the purpose of washing and drying it before shipment, has figured prominently in the rubber business on the west coast of Africa. It is described in an official report by Sir William Brandford Griffith, prepared during his incumbency of the office of governor of the Gold Coast Colony, in which the port of Cape Coast is located, and the industry probably was fostered by him. What advantage there can be in importing the rubber at Liverpool, in the crude, wet state in which it is received on the African coast, does not appear, unless it be that the supply of labor necessary for cleaning the rubber is more easily obtained in England.



WALTER S. BALLOU.

## RUBBER MACHINERY FOR JAPAN.

JAPAN has a full-fledged India-rubber factory, though the information regarding it which has reached the outside world is as yet rather vague. This is due to the fact that their orders for equipment have been placed through a mercantile house having branches in America and Europe, who have respected the wish of their clients to have kept secret, so far as possible, the details of their pioneer rubber industry. On this account not even all of those who have supplied material have known for whom it was intended. One thing which is certain, however, is that the Birmingham Iron Foundry (Birmingham, Conn.), about a year ago, sent to the Japanese firm, through their New York correspondent, a complete rubber-mill of small capacity, and the result has been so satisfactory that already the extension of the mill has been decided on, and the Birmingham foundry has received orders for additional machinery. The original order included a washer with mixers, grinders, and a calender, and the shipment now about to be made to Japan includes a tubing-machine and a covering-machine for electrical wires.

There has also been some crude India-rubber shipped from New York to Japan during the past year or two. During the fiscal year ended June 30, 1895, the amount of the shipment was 3381 pounds, invoiced at \$2061. The export of rubber in that direction has since continued, the amount reaching \$5754 for the quarter ending September 30. THE INDIA RUBBER WORLD is informed that shipments of recovered rubber have been made from this country to the new Japanese mill.

In this connection may be quoted a recent expression from the Singapore *Free Press* which, though written with reference to the growing cotton industry of Japan, is no less applicable to the many other branches of industry now being introduced in that country. The Singapore paper says: "Week after week we learn from Japanese papers that new machinery has been ordered and that, it must be remembered, of the very latest design. When the factories are all in working order the majority of them will have machinery that probably is unequalled by any in the world."

## OUR BICYCLE-EXPORT TRADE.

RUBBER-MEN have no little reason to be interested in the steady growth in the volume and value of exports of manufactures from the United States. A notable illustration of what can be done by intelligent persistent effort toward building up an export trade is shown by the experience of the bicycle trade, which will prove of interest to the India-rubber trade on account of the rubber involved in the construction of tires and some other accessories of wheels. In THE INDIA RUBBER WORLD for July 10 was published a statement of the bicycle-exports from New York alone during the preceding three months, the total amounting to \$728,603. This does not include the shipments across the Pacific, which go largely from San Francisco, or to Mexico, which go from southern ports of the United States. During the succeeding three months, ended September 30 last, the movement was still larger, the total for the two quarters being upwards of \$1,500,000, which is not a bad showing for an industry so new, and for a country which, only a few years ago, depended upon foreign manufacturers for its supply of bicycles. It is worth noting how many different countries have drawn upon the United States for bicycles during the six months. One who will look back into the July INDIA RUBBER WORLD, in connection with the following table, will see that Australasia has taken during this time

\$136,412 worth of our bicycles, Africa \$17,114 worth, Japan \$7365, and so on.

The details of bicycle exports from New York for the last three months are as follows:

COUNTRIES.	4 Weeks Ending July 28.	4 Weeks Ending Aug. 25.	4 Weeks Ending Sept. 30.	TOTAL.
Austria Hungary.....	\$ 75	\$ 180	\$ 150	\$ 405
Belgium.....	3,637	1,975	1,856	7,468
Denmark.....	2,399	460	861	3,720
France.....	5,575	6,702	6,111	18,388
Germany.....	18,186	22,113	28,447	68,746
Holland.....	29,635	21,347	4,208	55,190
Italy.....	8,175	10,347	21,011	39,533
Norway and Sweden.....	250	165	216	631
Portugal.....	....	301	....	301
Russia.....	2,304	70	500	2,874
Spain.....	85	....	250	335
Switzerland.....	....	180	285	465
United Kingdom.....	225,040	80,270	97,656	402,966
British North America.....	205	180	85	470
Mexico.....	581	1,908	1,597	4,086
Central America.....	339	1,084	1,097	2,520
British Honduras.....	....	240	80	320
West Indies—British.....	3,329	2,162	3,677	9,168
Danish.....	....	70	....	70
Dutch.....	28	....	....	28
Spanish.....	513	1,494	447	2,454
San Domingo.....	15	....	149	164
Argentina.....	268	140	4,515	4,923
Brazil.....	890	3,455	1,227	5,572
Chile.....	1,595	60	4,539	6,194
Colombia.....	2,006	3,780	1,370	7,156
Ecuador.....	158	100	639	897
Guiana—British.....	24	211	90	325
Dutch.....	....	....	60	60
Peru.....	300	100	60	460
Venezuela.....	3,155	1,363	4,134	8,652
Egypt.....	....	....	88	88
Africa—British.....	4,069	5,531	3,883	13,483
Other.....	....	644	445	1,089
China.....	....	2,020	337	2,357
Hong Kong.....	....	1,000	75	1,075
Japan.....	....	....	5,389	5,389
Turkey in Asia.....	70	....	45	115
Australia.....	20,961	32,107	43,505	96,573
New Zealand.....	7,795	2,528	2,447	12,770
Tasmania.....	....	800	....	800
British East Indies.....	180	1,293	5,249	6,722
Other British Colonies.....	360	....	....	360
Total.....	\$342,202	\$211,769	\$241,391	\$795,362

Taking \$50 as the average export value of bicycles, as in our former article, the valuation above given would allow for 15,907 bicycles, and as many pairs of tires. But the exports in this line have not been confined to bicycles. During the last three months there were exports recorded at the New York custom-house under the head of "bicycle material," amounting to \$52,292, and doubtless including various items of India-rubber. Under still another heading, that of cyclometers, the exports amounted to \$9118. In another part of this paper is reported the sale in Europe of important amounts of American bicycle-making machinery. It is not surprising, then, that so many bicycle supplies manufactured here should find a sale even in Europe.

THE disappearance is reported of Harold Gray, of Boston, manager in that city for the American Wringer Co. He was connected formerly with the Metropolitan Wringer Co., and remained in the Boston office after the consolidation of companies which formed the American. An investigation of his accounts was in progress at the time of his disappearance, and a heavy shortage is charged.

## TRADE AND PERSONAL NOTES.

THE first annual meeting of the Peoria Rubber and Manufacturing Co. (Peoria, Ill.) was held on September 15, at Marion, Ind. The reason for holding the meeting in another state is that the company were incorporated under the laws of the latter. Marion is also the headquarters of the Indiana Rubber and Insulated Wire Co., controlled practically by the same interests. The officers were reflected as follows: Monroe Seiberling, president and general-manager; J. H. Seiberling, vice-president; C. J. Butler (Kokomo, Ind.), secretary; A. G. Seiberling, treasurer. The remaining directors are Fred Patee and F. L. Kryder. The Peoria Company were organized one year ago, erected buildings at Peoria, and manufactured 10,000 Patee wheels, and the year's business is reported to have been profitable. A stock dividend of 25 per cent. and a cash dividend of 6 per cent. were declared.

=Mr. William Minot, formerly with the New York Belting and Packing Co., Limited, has become connected with the Mercer Rubber Co.

=Mr. Wilmer F. Dunbar, foreman of the hose department for the Eastern Rubber Manufacturing Co. (Trenton, N. J.), has accepted a position with the Diamond Rubber Co., Akron, Ohio.

=Frederick T. Comee, for some years past superintendent of the "Alice" rubber mill, at Woonsocket, R. I., has received a promotion in being appointed superintendent also of the Millville mill, to succeed Maurice J. Clark, resigned. The late Patrick J. Conley was superintendent of both factories of the Woonsocket Rubber Co., but since his time until now the two mills have not been under the superintendency of one and the same person.

=Mr. Wheeler Cable, president of the Cable Rubber Co. (Boston), after a summer of close confinement in his business, is taking a week's relaxation at Cape Cod, pickerel fishing.

=Mr. James Bennet Forsyth, general manager of the Boston Belting Co., has become so interested in sound money that he has selected some of the best editorial material that the ablest newspapers of the country have produced, had it reprinted at his own expense and sent to various of his agencies for distribution. Among the many interesting letters that he received in return was one from the southwest which said, "Trade is very quiet just now, or rather, trade would be good enough if we sold all the goods we could sell, but we are drawing in our credits and holding them closer than ever before. The first shot hit us to-day when a concern in — who had goods shipped them by us on August 27 amounting to \$337, the goods reaching there Sept. 1st, made a deed of trust on that day, securing certain alleged credits, took our goods out of the depot and that night sold the stock out at 75 cents on the dollar, the sale being made by the trustee. The owner of the concern was a free silver man." Evidently at a ratio of 75 to 100.

=Joseph Banigan is due to arrive from Europe on the date borne by this issue of THE INDIA RUBBER WORLD.

=Forty women operatives in the shops of the Seamless Rubber Co. (New Haven, Conn.), left their work on September 26, as a protest against the new rate of pay for water-bottles, on which they are employed. An official of the company is reported as saying that the factory had been run at a loss all summer, in order to afford the employees some means of assistance, and now that some very large orders had been received, giving a prospect for steady work for a long season, the company did not regard it as harsh treatment to reduce slightly the rate for piece-work.

=The Hood Rubber Co. are now advertising their new line of rubber foot-wear and will make two grades of rubber shoes. The firsts will be the "Hood" rubbers, the second grade will be a little lower in price and will be stamped the "Old Colony" Rubber Co.

=Mr. James J. Mulconroy, of Latta & Mulconroy (Philadelphia), was a recipient of railroad hospitality at the recent Road Masters Convention, Niagara Falls, New York.

=The Cable Rubber Co. (Boston), during the recent quiet times in trade, have made various additions to their plant, put in a new foundation for their engine, and sunk a huge well, that will give them a constant supply of water.

=Supt. Elwell, of the Clifton Rubber Mfg. Co. (Clarendon Hills, Mass.), is the patentee of a semi-hard rubber conduit to be used for insulating purposes.

=About this time of year when the Eastern rubber factories are beginning to turn on steam to warm up, the factories in the middle states start up little natural-gas stoves that hang midway between the ceiling and the floor, and they are excellent and economical heaters.

=George Watkinson & Co. (Philadelphia) are turning out a full line of rubber footwear—boots, overshoes, arctics, and lumbermen's. It is understood that they will sell direct to the retail trade, appointing one agent for each locality. Orders are said to be coming in at a satisfactory rate. The lasts used were made by the Philadelphia Last and Pattern Co.

=Stockholders of the Woonsocket Rubber Co. at the time of the consolidation with the United States Rubber Co. have received a circular signed by Colonel Colt, legal adviser of the latter company, stating that the Woonsocket company owes something over \$300,000, which must be made good. This means an assessment of about \$8 per share, of which ten-sevenths would fall on Joseph Banigan. It seems probable, by the way, that the suits brought by and against Mr. Banigan, reported in this paper last month, will be brought to an amicable settlement out of court.

=Mr. F. G. Littell, formerly superintendent of Parker, Stearns & Sutton's factory, New York, but who for two years past has been engaged in other fields, has returned to his old position. Mr. Littell was a most popular superintendent, which was proved by the greeting of the employees when he came back. Every department of the factory was decorated with bunting, flags and Chinese lanterns, and he was the recipient of a large floral horse-shoe, emblematic of the general wish that good luck attend his return.

=Mr. Thos. Harmer, formerly foreman of the grinder department of the N. Y. Belting & Packing Co., at Sandy Hook, Conn., has accepted a position with the New Jersey Car Spring & Rubber Co., Jersey City, N. J.

=Arthur Squires has established a plant at No. 216 Wooster street, New York, for the manufacture of dental rubber, dental dam, and similar products, under the name of the New York Vulcanite Rubber Co.

=The World Mfg. Co. (New York) in addition to their excellent trade in mechanical rubber goods, are doing a fine business in bicycle specialties. Their new Waterbury wrench above all other things seems to be a winner, one order that they received recently being for 50,000 wrenches.

=It is said that Mr. E. L. Perry, formerly superintendent of the Peerless Rubber Mfg. Co., and Mr. Chas. Masson, of the Ridgewood, N. J., are at work upon a new rubber factory at Hawthorne, N. J., which will employ about seventy-five hands.



=Mr. Geo. F. Virtue has connected himself with the Winthrop Mfg. Co. (Boston) and is perfecting a series of supplies, chiefly substitutes for the rubber trade, some of which bear promise of great usefulness.

=The Chase puncture proof tire won the one hundred mile road race from Lexington to Covington, Kentucky, early in September. The road was exceedingly rough and the rider, Mr. Cliff Nandant, made the excellent time 6 hours and 7 minutes. Several competing tires were punctured on the way.

=The Elastic Tip Co. (Boston), in view of the great development of the bicycle trade on the Pacific coast, have opened a branch house at No. 46 Market street, San Francisco, in charge of Robert Malcom, until lately manager of the city department of the Chicago Tip and Tire Co.

=The Birmingham Iron Foundry (Birmingham, Conn.) are building for the important rubber manufacturing firm of Pirelli & Co., of Milan, Italy, a six-roll 18" x 50" Pearce double-friction calender, which, with the take-ups and complicated drive, will weigh something like 75,000 pounds. The Birmingham company have, from time to time, supplied the Messrs. Pirelli with other machinery, besides filling numerous other orders from foreign manufacturers. At this time they have in hand orders for rubber machinery from Russia and Japan. Their Pearce calender, by the way, was described in THE INDIA RUBBER WORLD of July 10, 1895.

=Samuel Walker, Jr., has been appointed manager of the Eastern Rubber Manufacturing Co. (Trenton, N. J.), though Frank A. Magowan remains president of the company. Mr. Walker was the receiver of the company during their financial troubles a year ago or more.

=The Tyer Rubber Co. (Andover, Mass.) are reported to have every prospect for a good winter's business. All departments of their factory are being run full time.

=President L. D. Apsley, of the Apsley Rubber Co. (Hudson, Mass.), returned to Washington in September from a five-weeks' tour of a dozen states between the Mississippi and the Pacific coast, in his capacity as vice-chairman of the national Republican congressional committee. He made some political speeches while absent—notably one at Council Bluffs, Iowa.

=In front of the Waterbury Rubber Co.'s office, at No. 49 Warren street, New York, is suspended one of the largest of the many large campaign flags displayed in the city. It is 25 x 44 feet in size and bears the legend—

M'KINLEY AND HOBART.  
NO SPLIT DOLLARS.

The funds for the purchase of the flag were collected by the treasurer of the company, George A. Howe, from the neighboring business houses, in connection with his own. The wording of the legend, first suggested by Mr. Howe, has been repeated on other campaign banners, in and out of New York.

=The Manhattan Rubber Manufacturing Co. (New York) recently shipped two elevator-belts, weighing about 10,000 pounds each. They were forty-two inches in width, and each belt made a roll eight feet high.

=The Reading Rubber Manufacturing Co. (Reading, Mass.) declared a yearly dividend of 6 per cent. payable on September 15, to stockholders of record on September 2.

## REVIEW OF THE INDIA RUBBER MARKET.

THE rubber-manufacturers began, on the whole, to inaugurate more active operations during the latter half of the month which has elapsed since our last review, with the effect of giving some activity to the market for crude rubber in New York. Another influence which has tended in the same direction has been the relatively strong and active condition of the market at Pará, due in turn to the good consumption of rubber by European manufacturers. As for the factories in America, they have been so long buying at a "from-hand-to-mouth" rate that they are for the most part practically without stocks, and the slightest improvement in the demand for goods renders it necessary for them to come into the market for raw material. There has been, therefore, something of an advance, in Pará grades, over the figures last quoted for this market.

The new crop year on the Amazon opens with a new record for receipts at Pará,—1,375,000 pounds more than in any former year for the three months of July, August, and September. This, however, gives no promise for the remainder of the year, since there is no regularity in the output of rubber from that region, the larger receipts occurring sometimes at the beginning, and again toward the end of the year. It is probable that the recent upward tendency of prices has had the effect of hastening into market a good deal of Islands rubber, which would account in part for the unprecedented yield for the last three months. Some of the Islands rubber received in the United States has contained an unusual quantity of water, due, no doubt, to its having been shipped from the producing point with less than the usual delay.

As this paper is printed the steamer *Hubert* is due from Pará with 216 tons aboard.

The latest quotations in the New York market are:

PARÁ.		Benguela.....	
Islands, fine, new....	81 1/2 @ 82 3/8	Congo Ball.....	39 @ 41
Islands, fine, old....	none here	Cameron Ball.....	38 @ 39
Islands, coarse, new....	47 @ 47 1/2	Flake and Lumps....	25 @ 26
Islands, coarse, old....	none here	Accra Flake.....	18 @ 20
Upriver, fine, new....	83 @ 84	Accra Buttons.....	47 @ 48
Upriver, fine, old....	87 @ 88	Accra Strips.....	51 @ 53
Upriver, coarse, new....	54 @ 56	Lagos Buttons.....	42 @ 43
Upriver, coarse, old....	none here	Lagos Strips.....	43 @ 44
Caucho (Peruvian) sheet	40 1/2 @ 41	Liberian Flake.....	30 @
Caucho (Peruvian) strip	44 @ 45	Madagascar, pinky....	58 @ 60
Caucho (Peruvian) ball	50 @ 51	Madagascar, black....	42 @ 43
CENTRALS.		Mozambique, red ball....	@....
Esmeralda, sausage....	48 @ 49	Mozambique, white ball....	@....
Guayaquil, strip.....	33 @ 39	EAST INDIAN.	
Nicaragua, scrap.....	47 1/2 @ 48	Assam.....	42 @ 56
Nicaragua, sheet....	none here	Borneo.....	26 @ 41
Mangabeira, sheet....	40 @ 43	GUTTA-PERCHA.	
AFRICAN.		Fine grade.....	1.30
Thimbles.....	34 @ 35	Medium.....	1.00
Tongues.....	38 @ 39	Hard white.....	85
Sierra Leone.....	25 @ 52	Lower sorts.....	@....
Late Pará cables quote:		Balata.....	@....
Per Kilo.		Per Kilo.	
Islands, fine.....	7 \$300	Upriver, fine.....	@....
Islands, coarse.....	3 \$500	Upriver, coarse.....	@....
Exchange 8 3/4 d			

### PRICES FOR SEPTEMBER (ISLAND RUBBER).

1896.		1895.		1894.	
Fine.	Coarse.	Fine.	Coarse.	Fine.	Coarse.
First.....	79 43	73 1/2 48	67 45		
Highest.....	81 46	76 49	68 46		
Lowest.....	78 1/2 43	73 1/2 48	66 44		
Last.....	80 46	76 49	68 46		

The statistical position of Pará rubber in New York and

elsewhere is as follows, the figures expressing tons of 1000 kilograms:

	Fine and Medium.	Coarse.	Totals.	Totals.	Totals.
	188	88 =	276	234	992
Stock, August 31.....	188	88 =	276	234	992
Arrivals, September.....	538	193 =	731	595	606
Aggregating.....	726	281 =	1007	829	1598
Deliveries, September.....	516	174 =	690	639	634
Stock, September 30....	210	107 =	317	190	964
			1896.	1895.	1894.
Stock in England, September 30.....	730	755	755		
Deliveries in England, September.....	975	650	490		
Pará receipts, September.....	1680	1320	1300		
Stock in Pará, September 30.....	175	323	330		
World's supply Sept. 30 (excluding Caucho).....	2157	2034	3045		
Pará receipts since July 1.....	3720	3280	3170		

### THE ANTWERP RUBBER MARKET.

TO THE EDITOR OF THE INDIA RUBBER WORLD: Since our report of August 23, sales of Congo rubber in this market have amounted to 152 tons. Prices have been well maintained, and in some cases have shown a slight advance. Of this total, 96 tons were sold to arrive as follows: 25 tons red Congo thimbles at 3.45 francs per kilogram (12 tons spot, remainder to be delivered within three months); 30 tons Upper Congo Uellé at 5.15 francs (12 tons spot, remainder within three months); 41 tons Upper Congo Lupori, just arrived by the steamer *Albertville*, at 6 francs.

The other 56 tons were sold at the auctions of September 1 and 12, and between the sales. Of these, 7 tons of Kassai red balls of fine quality were sold at 7.07½ francs (brokers' estimation, 7.02½ francs); 9 tons Upper Congo Equateur, at 5.80 francs, and 15 tons same at 5.70 francs, partly sticky. The arrivals for the month amounted to 144 tons by the steamer *Albertville*, against 42 tons in the same month of 1895.

C. SCHMID & CO.

Antwerp, September 24, 1896.

### IMPORTS FROM PARÁ.

THE receipts of India-rubber direct from Pará and Manáos at the port of New York since our last publication are reported in detail below, the figures referring to pounds:

September 11.—By the steamer *Justin*, from Pará:

	Fine.	Medium.	Coarse.	Caucho.	Total.
Reimers & Meyer.....	56,800				56,800

### OTHER NEW YORK ARRIVALS.

BELOW will be found in detail the imports at New York during September, 1896, of India-rubber from Mexico, Central America, and South America, other than Pará grades; also, arrivals at New York of African and East Indian sorts:

SEPT. 1.—By the *Flamborough*=Belize:

Eggers & Heinlein .....	2,500
Samper & Jimenez .....	2,700
Total.....	5,200

SEPT. 1.—By the *Catania*=Bahia:

Reimers & Meyer.....	9,900
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SEPT. 1.—By the *Andes*=Port Limon:

Lanman & Kemp.....	700
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SEPT. 1.—By the *Alene*=Cartagena:

For London.....	7,500
D. A. D. Lima & Co.....	3,000
Hoadley & Co.....	500
Punderford & Co.....	100
Total.....	11,100

SEPT. 5.—By the *Grenada*=Trinidad:

Kunhardt & Co.....	9,000
Joseph Agostini.....	7,000
Total.....	16,000

SEPT. 8.—By the *Louisiana*=New Orleans:

Albert T. Morse.....	3,000
C. von Postan & Co.....	1,300
Total.....	4,300

SEPT. 8.—By the *Athos*=Greytown:

A. P. Strout.....	6,000
G. Amsinck & Co.....	1,500
A. N. Rotholz.....	800
W. R. Grace & Co.....	600
Total.....	8,900

SEPT. 9.—By the *Vigilancia*=Mexico:

J. Menendez & Co.....	700
E. Stelger & Co.....	500
Graham, Hinckley & Co.....	300
H. Marquardt & Co.....	200
Total.....	1,700

SEPT. 11.—By the *Allianca*=Colon:

R. F. Cornwell.....	4,885
Munoz & Espriella.....	2,688
Samper & Jimenez.....	2,480
Roldan & Van Sickle.....	2,400
G. Amsinck & Co.....	1,690
Flint, Eddy & Co.....	1,640
G. R. Cottrell & Co.....	1,622
Elmenhorst & Co.....	1,142
Lanman & Kemp.....	934
Frame, Alston & Co.....	900
Jacob Balz.....	705
A. P. Strout.....	638
De Sola, Hobo & Co.....	650
A. Santos & Co.....	450
A. M. Capen's Sons.....	389
Dumarest & Co.....	250
Total.....	23,463

New York Commercial Co.	13,600	2,900	16,200	3,400=	36,100
Sears & Co.....	10,700	1,400	8,400		20,500
Lawrence Johnson & Co.....	400	1,800	1,800	300=	4,300
P. Lima.....	2,200		1,700		3,900
Totals.....	26,900	6,100	84,900	3,700=	121,600

Sept. 21.—By the steamer *Sobralense*, from Manáos and Pará:

Reimers & Meyer.....	76,700	17,100	54,600		148,400
New York Commercial Co.	69,300	21,400	25,500		116,200
Sears & Co.....	28,600	5,700	12,600		46,900
Shipton Green.....	15,900	1,800	3,100		20,800
Albert T. Morse.....	6,800	2,500	1,900		11,200
P. Lima.....	1,800		1,600		3,400
Totals.....	199,100	48,500	99,300	3,700=	350,600

September 30.—by the steamer *Dominic*, from Pará:

Reimers & Meyer.....	75,000	8,600	56,800		140,400
New York Commercial Co.	87,100	14,600	36,800		138,500
Sears & Co.....	56,000	5,400	24,700		86,100
Otto G. Mayer & Co.....			13,200		13,200
Albert T. Morse.....	9,300	700	1,000		11,000
P. Lima.....	2,600		1,700		4,300
Totals.....	230,000	20,300	134,200	1,200=	394,700

	1896.	1895.
January Imports from Pará.....	2,718,300	2,869,500
February Imports.....	1,945,900	2,274,400
March Imports.....	2,786,300	3,611,700
April Imports.....	1,941,500	2,156,400
May Imports.....	1,527,800	1,651,400
June Imports.....	583,900	1,030,100
July Imports.....	727,000	666,200
August Imports.....	872,500	766,500
September Imports.....	896,900	1,335,900

### PARA EXPORTS VIA EUROPE.

September 12.—By the steamer *Umbria*, from Liverpool:

New York Commercial Co. (fine).....	105,000
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September 16.—By the steamer *Majestic*, from Liverpool:

New York Commercial Co. (fine).....	105,200
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September 18.—By the steamer *Lucania*, from Liverpool:

New York Commercial Co. (fine).....	26,200
New York Commercial Co. (medium).....	67,000
New York Commercial Co. (coarse).....	26,800

September 24.—By the steamer *Aurania*, from Liverpool:

New York Commercial Co. (fine).....	111,600
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September 26.—By the steamer *Etruria*, from Liverpool:

Otto G. Mayer & Co. (coarse).....	22,600
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SEPT. 14.—By the *Alleghany*=Cartagena:

Punderford & Co.....	1,200
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SEPT. 15.—By the *Knickerbocker*=New Orleans:

W. H. Crossman & Bro.....	5,000
Albert T. Morse.....	2,500
Total.....	7,500

SEPT. 16.—By the *Orizaba*=Mexico:

H. Marquardt & Co.....	500
J. W. Wilson & Co.....	100
Total.....	600

SEPT. 18.—By the *El Sud*=New Orleans:

Albert T. Morse.....	5,000
Ellinger Bros.....	700
Total.....	1,200

SEPT. 19.—By the *Prins Frederik Hendrik*=Trinidad:

Thebaud Bros.....	3,000
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SEPT. 19.—By the *Wordsworth*=Bahia:

Reimers & Meyer.....	6,300
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SEPT. 21.—By the *Advance*=Colon:

A. Santos & Co.....	6,675
Hirzel, Feltman & Co.....	5,737
Roldan & Van Sickle.....	4,980
Piza, Nephews & Co.....	2,770
W. R. Grace & Co.....	1,700
Munoz & Espriella.....	1,600
Lanman & Kemp.....	1,000
G. Amsinck & Co.....	970

Dumarest & Co.....	853
D. A. De Lima & Co.....	860
Total.....	27,230

SEPT. 22.—By the <i>Albena</i> =Greytown :	
A. P. Strout.....	6,000
Andreas & Co.....	5,500
Munoz & Esparilla.....	4,600
G. Amsinck & Co.....	1,500
Total.....	17,000

SEPT. 23.—By the <i>Saratoga</i> =Mexico :	
E. Nelson Tibbals.....	500
Joseph Ware.....	500
Total.....	1,000

SEPT. 24.—By the <i>Irawaddy</i> =Trinidad :	
Kunhardt & Co.....	5,500

SEPT. 25.—By the <i>Normannia</i> =Hamburg :	
Windmuller & Roelker.....	20,000

SEPT. 28.—By the <i>Louisiana</i> =New Orleans :	
W. H. Crossman & Bro.....	8,800
Albert T. Morse.....	2,000
Total.....	11,500

SEPT. 29.—By the <i>Alene</i> =Cartagena :	
D. A. De Lima & Co.....	1,500
Kunhardt & Co.....	500
For Hamburg.....	1,000
Total.....	3,000

Total Centrals for September.....	185,993
Total for August.....	116,215
Total for July.....	241,044
Total for June.....	154,987
Total for May.....	200,926
Total for April.....	175,311
Total for March.....	167,924
Total for February.....	297,762
Total for January.....	339,937

## AFRICANS.

SEPT. 3.—By the <i>Werkendam</i> =Rotterdam :	
George A. Alden & Co.....	111,700

SEPT. 7.—By the <i>Kensington</i> =Antwerp :	
Reimers & Meyer.....	11,000

SEPT. 4.—By the <i>Campania</i> =Liverpool :	
Reimers & Meyer.....	16,100

SEPT. 10.—By the <i>Patria</i> =Hamburg :	
Albert T. Morse.....	4,800

SEPT. 13.—By the <i>St. Louis</i> =Southampton :	
George A. Alden & Co.....	10,900

SEPT. 13.—By the <i>Laucania</i> =Liverpool :	
George A. Alden & Co.....	11,100
Reimers & Meyer.....	6,700
Total.....	17,800

SEPT. 13.—By the <i>Prussia</i> =Hamburg :	
George A. Alden & Co.....	15,200
Reimers & Meyer.....	15,300
Windmuller & Roelker.....	9,300
Total.....	39,800

SEPT. 21.—By the <i>Michigan</i> =London :	
G. Osgood Lord.....	800

SEPT. 24.—By the <i>Aurania</i> =Liverpool :	
Sgal & Co.....	9,000

SEPT. 23.—By the <i>Southwark</i> =Antwerp :	
Otto G. Mayer & Co.....	2,300
Sgal & Co.....	800
Total.....	2,900

SEPT. 27.—By the <i>St. Cuthbert</i> =Antwerp :	
George A. Alden & Co.....	6,900

SEPT. 26.—By the <i>Etruria</i> =Liverpool :	
Sgal & Co.....	11,200
Reimers & Meyer.....	7,600
Total.....	18,800

SEPT. 23.—By the <i>Phantasia</i> =Hamburg :	
George A. Alden & Co.....	9,000

SEPT. 28.—By the <i>Peninsular</i> =Lisbon :	
Reimers & Meyer.....	27,100
Total Africans for September.....	287,800
Total for August.....	108,600
Total for July.....	234,300
Total for June.....	303,300
Total for May.....	693,800
Total for April.....	315,300
Total for March.....	775,100
Total for February.....	316,300
Total for January.....	424,900

## EAST INDIAN.

SEPT. 1.—By the <i>Mohawk</i> =London :	
Reimers & Meyer.....	5,900
Reimers & Meyer (Pontianak).....	22,500
Total.....	28,400

SEPT. 7.—By the <i>Covic</i> =Liverpool :	
George A. Alden & Co.....	1,600

SEPT. 7.—By the <i>Mobile</i> =London :	
Reimers & Meyer.....	8,000

SEPT. 13.—By the <i>Ontario</i> =London :	
Reimers & Meyer.....	12,600

SEPT. 25.—By the <i>Manitoba</i> =London :	
Reimers & Meyer.....	22,800
Reimers & Meyer (Pontianak).....	53,000
Total.....	75,800

SEPT. 29.—By the <i>Hindoo</i> =London :	
Robert Soltan & Co.....	45,000
SEPT. 30.—By the <i>Mississippi</i> =London :	
Reimers & Meyer.....	3,800

Total East Indian for September.....	171,800
Total for August.....	418,300
Total for July.....	63,900
Total for June.....	130,900
Total for May.....	575,500
Total for April.....	322,400
Total for March.....	310,100
Total for February.....	265,600
Total for January.....	315,400

## RECAPITULATION.

	POUNDS.
Para—direct imports.....	866,900
Para—via Europe.....	464,400
Centrals.....	185,993
Africans.....	287,800
East Indian.....	171,800

Total at New York for September.....	1,976,893
Total for August.....	1,659,815
Total for July.....	1,806,244
Total for June.....	1,280,587
Total for May.....	3,171,726
Total for April.....	3,271,311
Total for March.....	4,192,224
Total for February.....	2,840,862
Total for January.....	2,823,537

## BOSTON ARRIVALS.

	POUNDS.
SEPT. 8.—By the <i>Scythia</i> =Liverpool :	
George A. Alden & Co.—East India.....	2,100
Reimers & Meyer—Africans.....	17,500

SEPT. 9.—By the <i>Columbian</i> =London :	
George A. Alden & Co.—East India.....	7,990

SEPT. 13.—By the <i>Bohnia</i> =Liverpool :	
George A. Alden & Co.—Africans.....	2,200

SEPT. 22.—By the <i>Sagamore</i> =London :	
George A. Alden & Co.—Africans.....	2,500

SEPT. 26.—By the <i>Borderer</i> =London :	
George A. Alden & Co.—East India.....	3,700

SEPT. 29.—By the <i>Mareca</i> =Hamburg :	
George A. Alden & Co.—Africans.....	9,300

Total at Boston for September.....	45,380
Total for August.....	7,000
Total for July.....	419,180
Total for June.....	35,770
Total for May.....	69,890
Total for April.....	122,060
Total for March.....	209,601
Total for February.....	210,000
Total for January.....	72,800

## NEW ORLEANS.

	POUNDS.	VALUE.
SEPTEMBER.		
Nicaragua.....	25,449	\$11,886

## AUGUST EXPORTS OF INDIA-RUBBER FROM PARA.

From "A Provincia do Pará."

[NOTE.—The figures denote weights in Kilograms.]

EXPORTERS.	UNITED STATES.					EUROPE.					TOTAL.
	FINE.	MEDIUM.	COARSE.	CAUCHO.	TOTAL.	FINE.	MEDIUM.	COARSE.	CAUCHO.	TOTAL.	
Pusinelli, Prusse & Co.....	30,940	6,800	48,620	35,680	122,040	164,390	32,640	50,060	5,700	252,790	374,830
Adelbert H. Alden.....	29,418	7,165	27,965	4,538	66,086	28,404	9,180	26,400	24,036	88,020	154,106
Rud. Zietz.....						83,470	11,390	36,600	3,426	134,886	134,886
La Rocque da Costa & Co.....	170	3,740	15,600	138	19,648	51,510	4,250	35,060	4,080	94,900	114,548
Denis Crouan & Co.....						19,040	3,719	8,314	145	31,218	31,218
B. A. Antunes & Co.....						17,170	1,840	3,080		22,090	22,090
R. F. Sears & Co.....	5,100	680	4,200		9,980						9,980
Singlehurst, Brocklehurst & Co.....						3,882	940	2,527		7,349	7,349
Pires, Teixeira & Co.....	3,200		3,110		6,310						6,310
Sundry small shippers.....						22,979	2,900	22,819		48,698	48,698
From Manaoas, direct.....	62,405	9,360	14,582	106	86,453	114,463	19,724	24,995	12,569	171,751	258,204
Total.....	131,233	27,745	111,077	40,462	310,517	505,308	86,583	209,855	49,956	851,702	1,162,219



